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KINDERGARTEN TEACHING
IN INDIA

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Kindergarten Teaching In India

STORIES, OBJECT LESSONS
OCCUPATIONS, SONGS AND GAMES

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MRS. BRANDER

INSPECTRESS OF GIRLS' SCHOOLS, NORTHERN AND CENTRAL CIRCLES, MADRAS



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INTRODUCTION.

AS in Parts I. and II. of this book, the stories, songs and games in this Part are Indian; the animals, plants and objects about which lessons are given are those of India, and the close connection between all that is taught is continued. As in the other Parts the material is more than can be utilized in some schools in one year. Scope is thus given for choice and for variety in different years. In ordinary schools the amount that can be accomplished by the Second Standard in the year will probably be somewhat as follows:

Stories. Four.

Songs and Games. Six.

Object Lessons. Sixteen or Twenty, thus:

Common Objects. Four.

Familiar Animals. Four.

Familiar Plants. Four.

Familiar Minerals. Four.

Miscellaneous. Four.

The writer desires to acknowledge her indebtedness to the authors of the following books, from which she has taken, or has adapted, extracts:—

“Indian Nights Entertainment,” by the Rev. C. Swynerton.

“Serious Thoughts on Common Subjects,” by Chester Macnaghten.

"Representative Men of Southern India," by G. Parameswaram Pillai.

"Pearls of the Faith," by Sir Edwin Arnold.

"Object Lessons," by Vincent T. Murché.

"The Indian Magazine," Papers on the Palmyra, by Mr. Symonds.

"Ancient Ballads and Legends of Hindustan," by Toru Dutt.

"Folk-Lore of Southern India," by Charles Gover.

"The Divine Pariah," by the Rev. W. Robinson.

"The Jungle Book," by Rudyard Kipling.

"Balikapushnam," by Manicka Valli.

The Indian Ball Game and Song were played and sung in former times by Brahmin girls but are now almost forgotten. The writer is indebted to Mr. C. V. Swaminatha Iyer, of the Diffusion of Knowledge Agency at Madras, for this song and game, which it is hoped may now be revived.

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KINDERGARTEN TEACHING IN INDIA.

STORIES.

INTRODUCTION.

THE general remarks in Part I, on the educative value of stories, apply equally to Standard II.

The children entering this Standard, however, have been at school for two years. Their imaginations have been awakened by stories and songs, their interest in others and in the world about them has been aroused, their knowledge of language and their powers of expressing their thoughts have increased. Hence they can understand and appreciate stories of a higher type, told in somewhat more difficult language than here-to-fore.

The teacher should tell the following stories in an interesting manner and in simple, clear, well-chosen language, laying emphasis on the points which she wishes the children to notice and by which she hopes to influence their characters.

After a story and the chat about it are finished, the children should tell the story again, in their own words, helped by

each other and by the teacher when necessary. The latter will gather, from their narration, how the story has impressed them and how far she has succeeded in her aim.

The teacher should train the children to express their meaning in complete sentences and in simple, accurate and spirited language. If she tells the story well and they are interested in it, they will not fail to tell it again in a spirited manner, generally unconsciously choosing the best modes of expression.

The first story is a very ancient one, from the Mahābhāratha. It is especially suitable for children who live near the mouth of a great river, not far from the sea, and where floods occur. It may, however, be made intelligible to all, by explanations and illustrations. The underlying thought is, of course, the weakness of obstinacy. Those who will not yield when they should, are overthrown and conquered. The story contains a beautiful word-picture of the ocean, the rivers, the great trees and graceful canes, and the great floods swirling the uprooted tree trunks down to the sea. All this should be brought out by the teacher and made vivid to the children.

The second story is an adaptation of one which is current in the north of India. It will be best understood by Muhammadan children, but will interest all. The feelings which the teacher will try to arouse in the children by this story are compassion for the poor and friendless, the desire to see justice done to them and indignation against all who oppress them.

The third story, about Sabuktagin, will also appeal especially to Muhammadan children, but the fact that it is about a real man and the father of one about whom they will hear again in their history lessons, will make it interesting to Hindus also. The story teaches, simply and well, a lesson of compassion and mercy.

The fourth story, about the three fishes, is also an ancient one from the Mahābhāratha. It introduces the children to a new scene, where all things live in water and fishes are the principal beings. Indirectly such stories foster a fellow-feeling with animals, by causing children to put themselves in the place of the animals and to see things from their point of view. These three fishes will also interest the children because they have distinct characters. The story should be so told as to arouse a great respect for the fishes with forethought and presence of mind, and strong disapproval of the poor procrastinating fish.

The incident related in the fifth story actually happened. This will commend it to children in Standard II., who are approaching the age when the love of real incidents and real people supplants the love of the marvellous. The similarity of Runganadam's life to their own will enhance their interest in him, and the teacher should so tell the story as to lead them to admire, and long to emulate, the little village hero's devotion, courage and manliness.

The sixth story (from the Mahābhāratha) is valuable for the good description of forest life and of the habits of the animals who play their different parts in it. It also inculcates, in an attractive manner, courage and helpfulness and presence of mind, and shows that, sometimes, even enemies are thankful for each other's help.

The seventh story, of the dove and her young ones, will especially appeal to Mussalman children, who are accustomed to the doves which live on the roofs and terraces of their mosques and associate these birds with incidents in the life of their Prophet. The underlying lessons inculcated are, as will be seen, the strength of mother-love and the extraordinary courage which it awakens in the weakest creatures, and compassion and fellow-feeling for the bird-folk and the weak.

The story of the Sāl Tree and the Wind (the eighth) is again an ancient one, taken from the Mahābhāratha. It is valuable for the excellent description of the great tree and of all the creatures to which it gave shelter and protection. Unconsciously the children will feel the interdependence of everything in that forest life and the far-reaching effects of the protecting influence of the great tree. Some idea of the great power of the wind will also be brought before the children, probably for the first time. The weakness and foolishness of vanity and boastfulness are, of course, the thoughts to be brought home to the children, and this the story does, in an impressive and amusing manner.

The ninth story, of the Spider and the Dove, is again especially suitable for Mussalman children, but it, and the seventh also, will interest all. It illustrates once more the truth, already presented to them in previous stories and songs, that, in this world, we are all dependent one upon another, and that the weakest and most insignificant may help the greatest. If it had not been for the insignificant and weak spider and dove, the great Prophet would have been taken prisoner, and would, perhaps, have lost his life.

The tenth story, about the Parrot and the Forest Tree, is another one from the Mahābhāratha, and has some points of resemblance to the sixth and eighth stories. It presents a new aspect of the power of unselfish devotion and gratitude. The parrot is faithful to the tree that sheltered him so long, and will not forsake it, even when it is apparently dead. When offered a boon by the Brahmin, the parrot asks nothing for himself, but craves for renewed life for his old friend the tree.

The eleventh story, of the Elephant, introduces the children to an entirely new scene, a battle, and to a noble animal for which all Indians have a great respect. That the powerful and stately elephant should show such obedi-

ence, love and devotion, will impress upon the little ones the value of these qualities. If the lordly elephant is so gentle and obedient, much more should children be so.

The last story, of the Fowler and the Doves, is again from the Mahābhāratha, and again depicts a scene in a forest, but this time a violent storm is in progress, a new experience for the children. They should be reminded of the Lord of the Wind, and the storm should be vividly described to them. The fowler, the dove, and the great forest tree are now familiar characters to them, and they will be able to imagine the scenes clearly. The story inculcates a very high ideal of hospitality and of the duty of protecting, by any sacrifice, those who throw themselves on our mercy. The ideal is an oriental one, and contains nothing strange to Indian children.

FIRST STORY.

THE OCEAN, THE RIVERS AND THE CANE.

ONE day the Ocean said to the Rivers, "O Rivers! when you are full of water you every day bring me the trunks of large trees, torn up by the roots and with all their branches on. You do not, however, ever bring me a cane. The canes that grow on your banks are weak; their stems are thin; it cannot be difficult to uproot them; yet you never bring me one. Why is this?" Then the River replied to the Ocean, "O Lord of all Rivers! trees stand firm and will not bend when our waters rush against them, therefore they are obliged to leave their place and come with us. Canes act differently. When they see our waters approaching they bend and yield, and when our floods have passed on they stand upright again. Therefore the canes remain where they grow and do not have to come with us."

SECOND STORY.

THE BANGLE-SELLERS.

Once upon a time there lived, in Lahore, a Governor whose name was Abdul Khan. He oppressed the people of the town and made them pay heavy taxes, and, if he knew that any of them possessed wealth, he never rested until he had robbed them of it. Now at the same time there lived in Lahore a poor man and his wife. They earned their living by selling bangles. One day they

passed the Governor's palace, crying as usual, "Bangles for sale! Bangles for sale! Who'll buy glass bangles?" The Governor's wife, who was sitting at a closed lattice of the zenana, heard the cry and sent her slave girl to bring the woman and the bangles to her. The poor woman, hoping to sell some bangles, gladly went. When she had gone, the Governor looked down from his balcony and saw the bangle-seller waiting in the street. He asked one of his peons who the man was. Now that peon had a quarrel with the bangle-seller, so he answered, "My lord, the man pretends to be a poor bangle-seller, but in reality he has, it is believed, much hidden wealth." The Governor, hearing this, told the peon to bring the bangle-seller into his presence, and ordered him to confess where he had hidden his wealth. "Alas! my lord," answered the man, "I have no wealth to hide; my wife and I hardly earn enough to live on." Thereupon the Governor ordered the bangle-seller to be thrown into prison, and it was done. Presently the bangle-seller's wife returned from the zenana, eager to tell her husband that she had sold some bangles, but nowhere could she see him. She asked the door-keeper where her husband was, and the man told her that the Governor, hoping to seize his wealth, had put him in prison. The woman, in great distress, went to the Kazi, and asked him what she should do. He said, "Go to the great saint, Shah Chumchirrag, at Rawal Pindi, and see what he can do for you." The road was long and difficult, but the bangle-woman, determined to obtain her husband's release, went to the saint and said, "The Governor of Lahore has seized my husband and put him into prison, because he could not tell the Governor where our wealth is concealed. We are poor bangle-sellers and have no wealth." Then the fakeer took a scrap of paper and wrote on it these words:

“SHAH CHUMCHIRRAG TO ABDUL KHAN.

“Let us eat and let us drink,
Yet of God let us think,
The swing in the end must sever !
What is it though we rise
At a bound to the skies ?
We cannot swing on for ever !
All our pomp and all our pride,
Must for aye be laid aside,
The Guest of the Grave enjoys it never.”

“Take this letter,” the saint said, “to the Governor of Lahore, and your husband will be set free.” Gladly the poor bangle-woman did as he bade her. She took the letter to the palace, and it was delivered by one of his slaves to Abdul Khan, as he sat on the house top in the cool of the evening. When he read it and understood that the great saint had heard of his doings and rebuked him, Abdul Khan started to his feet and ordered that the bangle-man should be immediately released from prison. Sorry for the injustice which he had shown, the Governor gave the bangle-seller and his wife a small house near the palace, and the Governor’s wife bought many bangles from them.

THIRD STORY.

THE FATHER OF MAHMUD OF GHAZNI.

When, next year or the year after, you begin to learn the history of your country of India, you will hear about a famous man called Mahmud of Ghazni. It is of Mahmud’s father, Sabuktagin, that the following story is told.

Sabuktagin, though of royal descent, was at first the slave of Alptagin, the first king of Ghazni ; but he must

have been something more than a mere slave, for he married Alptagin's daughter and succeeded him on the throne. However, in his youth, Sabuktagin was poor, so poor that he had only one horse, and, on this horse, he spent much time in hunting on the plains round the town where he then lived. It chanced, one day, that he saw a doe feeding, fearless of danger, with a fawn at her side, and spurring his horse he soon caught the fawn, and binding its legs, carefully laid it on the saddle before him. Then he went back towards the city. But, as he went, the poor doe followed, gazing after him in a piteous manner; and Sabuktagin's heart was so moved with compassion that he let the fawn go free. Then the mother, overjoyed, returned with her young one to their glad, free life in the fields, but still she kept glancing back at Sabuktagin, her great eyes brimming with gratitude and love. That very night, Sabuktagin beheld, in a dream, the glorious Prophet, who said, "O, Amir Sabuktagin, the tender mercy which thou hast shown towards a defenceless and unhappy creature has been accepted before God's throne, and in the council chamber of the One God thy name is inscribed on the roll of kings. Wherefore, thou must always behave in this same manner to all thy people, nor ever give up this quality of mercy; for kindness and compassion are a well-spring of blessedness both in this world and in the next."

FOURTH STORY.

THE THREE FISHES.

In a shallow lake there lived three fishes that were friends and constant companions. One fish had great forethought, and always liked to provide for what was coming. Another

fish had great presence of mind. The third fish put off doing everything until the last moment.

One day some fishermen came to the lake, and began to bale the water out, and to pour it into a lake at a lower level. The water in the fishes' lake grew still more shallow. The fish that had foresight, noticing this, said, "There is danger; let us all leave this place," and he swam quickly away, and reached the lower lake in safety. The fish with presence of mind answered, "When the time comes I shall know what to do." The third fish said, "There is danger coming, but it has not yet arrived. There is no need for haste"; and these two fishes remained in the shallow lake.

The fishermen, having baled out the water, shut in the fish that remained, and began to catch them. The procrastinating fish was caught with many others and died. The fish with presence of mind kept out of the way of the fishermen until they began to tie the fish they had caught to a long line. Then he thrust himself among the fish, and bit the string to look as if he too were tied. The fishermen removed the line to deep water, to wash the fishes, when the fish that was noted for presence of mind let go the string and escaped.

FIFTH STORY.

THE SON WHO RESCUED HIS FATHER FROM PRISON.

Once upon a time there was a boy called Runganadam. His father was very poor, but he was learned, and he taught his son so well that, when Runganadam was only eight years old, he could speak Sanskrit.

Runganadam was very fond of play and had grand games with other boys in the village. He could scale the highest

walls and climb the tallest trees. When he was twelve years old trouble came to the family. The rains failed, his father's crops died, and his father was unable to pay the taxes to Government. Then the police came and took the father away to prison. This made Runganadam very sad and he cared no longer to play with the other boys and to climb walls and trees. One day, when he went into their little house, he found his mother sitting on the ground and crying bitterly. He sat down beside her and said, "Mother, mother, what is the matter, why do you cry thus?" His mother answered, "Alas! what can I do? In two days more your grandfather's annual ceremony must be performed. No one but your father can perform it, and he is in prison," and she fell to weeping again.

Runganadam sat thinking, and then he rose and left the house, for he had thought of a plan to release his father.

The prison was at Chittur, and the English Judge also lived there. Runganadam made up his mind to go to the Judge and ask him to release his father from prison.

He had several miles to walk, but at length he came to the Judge's house and saw him sitting in the verandah. Runganadam began to feel frightened and would have liked to turn round and run back to his village, but he thought of his father and, going into the verandah, made a low salaam to the Judge.

"What is it, my boy, what do you want?" said the Judge, and his voice was kind. Runganadam forgot his fear and told the Judge all that had happened. He told him that the crops had failed, his father had no money or grain wherewith to pay the Government dues and was in prison. In two days the grandfather's annual ceremony must be performed and the father was not there to do it. Runganadam implored the Judge to release his father, that he might perform the ceremony. The Judge listened kindly,

but answered, "Your father is a debtor to Government. I cannot release him unless you can give me security in his stead." Runganadam answered, "I can give your Honour nothing but myself. Put me into prison and release my father."

Then the Judge was much pleased with Runganadam and felt sure that the father of such a boy must be an honourable man. The Judge at once wrote an order for the release of the father and gave it to Runganadam, who, salaaming gratefully to the Judge, went quickly to the prison. As soon as the Superintendent of the prison saw the order he released his prisoner and Runganadam and his father set off to walk to their village.

Late at night they arrived at home and Runganadam's mother could hardly believe her eyes when she saw her husband come into the house. Then he told her all that Runganadam had done, and she was overjoyed and praised and caressed Runganadam. He grew up to be a learned and clever man, famous throughout Southern India, and at last he became a Judge himself, but he never forgot that night, nor the joy and kindness of his parents, after he had obtained the release of his father from prison.

SIXTH STORY.

THE CAT AND THE MOUSE.

Once upon a time a large and beautiful banian tree grew in the midst of a forest. It was covered with creepers and many birds built their nests in its branches. It had a large trunk and its branches spread out on all sides. The shade under this tree was so cool and refreshing that many animals made their homes there.

A mouse of great wisdom, named Palita, lived at the

foot of the tree. He had made a hole there with a hundred outlets. On the branches of the tree a cat called Lomaça, lived happily. A Chandāla came into the forest and built a hut for himself near the tree. Every evening he spread his nets of leathern strings, in which many animals were caught during the night, and every morning the Chandāla came and took the animals out of his nets.

One evening the cat was caught in the Chandāla's snare. The mouse, Palita, seeing that his enemy the cat could not catch him, came out of his hole and ran about fearlessly. He even got upon the trap and began to eat the meat which the Chandāla had put there as a lure. Intent upon eating, he saw nothing but the meat, until, looking up, he found his enemy the mungoose watching him, with coppery eyes, while, on the other side, an owl, with a sharp beak, was preparing to pounce upon him. But the mouse did not lose his courage or his wisdom. "Oh dear!" he thought, "What shall I do? I am in great danger, but the cat is in great danger too. If I offer to help him, I wonder if he will help me!" Then he whispered to the cat, "Lomaça, listen! The mungoose and the owl are waiting to devour me. If you will let me creep under your body and lie there safely, I will nibble the cords of the net and set you free." The cat, hearing this, was glad, for he knew that if the Chandāla found him in the net he would be killed. So the cat said, "Creep under my body, Palita, and lie safe." The mouse gladly crept under the cat's body and lay there until the mungoose and the owl grew tired of waiting and went away. Then Palita crept out, nibbled the cords of the snare and ran swiftly away to his hole with the hundred outlets, at the foot of the banian tree. Lomaça, disentangling himself from the net, escaped to the branches of the tree. Thus the mouse and the cat helped each other.

SEVENTH STORY.

THE DOVE AND HER YOUNG ONES.

Once upon a time a follower brought to Muhammad some young doves and said, "O! Prophet! As I passed through a wood I heard the voice of young doves chirping, while their pearl-necked mother sat near and cooed. Taking the nest with the young ones in it I tied them in my cloth and brought them away. But the mother fluttered after me and see! she has followed even to here." The dove perched on a high palm tree and Muhammad told the man to open his cloth, lay the nest on the ground and stand aside. He did so and immediately the mother-dove flew down to her nestlings. She did not think of danger to herself; she only thought if she could help her young ones.

Muhammad said, "This gentle dove is braver than a soldier in battle. Put back her nest and young doves upon the tree from which you took them." The man put them back and the mother-dove was happy and sat and cooed to them as before.

EIGHTH STORY.

THE SĀL TREE AND THE LORD OF THE WIND.

On a high mountain stood a lordly tree. It was hundreds of years old. Its trunk was huge, its branches spread out widely on every side and its twigs and leaves were innumerable. Its branches were loaded with flowers and fruits. Parrots and many other birds lived happily in its boughs. Tired elephants, bathed in sweat, rested in its

shade. Caravans of merchants and other travellers halted under the tree to rest and cook their food. Saniyasis, living in those woods, sat in meditation under the shade of this great king of trees.

One day a holy sage called Narāda came that way, and seeing the beauty and usefulness of the tree, praised it and said, "How is it that your branches and leaves are never broken or torn? You must be under the special protection of the Wind Lord. He must be a great friend of yours." Then the tree grew proud and vain and answered boastfully, "The wind is no protector of mine, I am stronger than he. The wind breaks many things, other trees and mountains, but I have many times broken the wind."

Narāda answered, "You are foolish and wicked to boast like this. Neither Indra, the Lord of Rain, nor Yama, the Lord of Death, nor Varuna, the Lord of the Waters, is equal in might to Pavana, the Wind Lord. How then can you, who are only a tree, be equal in strength to him?"

Then Narāda went to Pavana and told him what the sāl tree had said. Hearing Narāda's words the Lord of the Wind grew angry, and going to the tree said, "I shall certainly show thee my power. I have known thee for hundreds of years. Remembering this I have never broken thy boughs nor torn thy leaves, but now I shall show thee my strength." The sāl tree laughed and answered scornfully, "Show me all thy power, I do not fear thee!" The Wind Lord said, "To-morrow I shall test thy strength." Then night came.

Now although the sāl tree had answered scornfully, he knew that, in reality, he was much weaker than the Wind Lord, and in his heart he was afraid. Therefore he caused all his branches, leaves and flowers to be cut off.

Next morning, when the Wind approached, breathing hard and felling all that stood in his way, he saw the sāl

tree before him, bare of branches, twigs, leaves, flowers and fruit. The Wind laughed aloud and said, "O Sāl, thou hast done to thyself exactly what I would have done to thee." Hearing these words of the Wind, the tree felt greatly ashamed.

NINTH STORY.

THE SPIDER AND THE DOVE.

The Prophet Muhammad, with a few followers, was fleeing from Mecca to Medina. His enemies were close behind, and, to escape them, he and his friends entered a cave; leaving their foot-prints in the sand around it. The pursuers drawing near, saw the foot-prints and said, "Those whom we pursue are in that cave; let us search it." But when they came to the cave they found a spider's web-spun across its entrance and the spider clinging to the web. Also they found there a dove's nest, with the mother bird sitting on her eggs and they heard her mate cooing from within the cave. Then the pursuers said, "We need not search the cave; if men had entered it this web would be broken and the doves would have flown away." They passed on, and the Prophet and his followers escaped.

TENTH STORY.

THE PARROT AND THE FOREST TREE.

Once upon a time a parrot lived in a mighty forest tree. In a neighbouring village dwelt a fowler, who used to kill the animals of the forest with a bow and poisoned arrows.

One day the fowler took his bow and some of his poisoned arrows and went to the forest. Seeing a dove

of antelopes not far from him, he discharged an arrow at one of them. The arrow missed the antelope, but pierced the mighty tree, in which the parrot lived. Because the arrow was tipped with virulent poison, the tree withered away and its leaves and fruit dried up and fell off. The parrot mourned sadly when he saw what had happened, for he had a great affection for the tree. On account of this he would not leave it, but sat on a bough, motionless, silent, sorrowful and without food, until he also began to wither away. A Brahmin, passing by, saw the bird and said, "Oh parrot, this tree is withered and without leaves and fruit; it is not fit to be your home. The forest is large, and in it there are many fine trees, covered with foliage and fruit. You should forsake this old dead tree." But the parrot replied, "Oh, sir! I was born in this tree and have lived in it all my life. It has sheltered me from danger and has fed me with its fruit. How can I forsake it now?" The Brahmin, hearing this, was much pleased with the parrot, and asked, "Can I do anything for you?" The parrot answered, "Oh, sir! revive the tree." Then the Brahmin sprinkled nectar over the tree, and watered the ground round about it, and the tree revived and new leaves and fruit grew on it. The parrot rejoiced exceedingly, and lived for the rest of its life happily in the tree.

ELEVENTH STORY.

THE INDIAN ELEPHANT HERO.

There was once a noble elephant called Hero, who, with his mahout, went into battle, bearing the standard of their king. When the mahout was killed by a shot, which also grievously wounded the elephant, the noble beast refused to move without his master's order. How could he know

that that master was dead? The troops on his side began to waver, and then fell back as the enemy advanced: they seemed to be stricken with panic. But still the noble beast stood firm: he could not move till his master bade him. Resolutely he kept his ground, the banner still waving over his head; and, seeing it, the disheartened soldiers rallied and charged again with such spirit that nothing could resist them. Thus retreat was turned into victory. The battle was won; the struggle was over. But the dauntless elephant stood there still. The voice which had bidden him march and halt—that voice alone could bid him retire. For three long days, and three long nights, no one could move him from his post. Then the soldiers remembered the dead mahout's son, a little child nine years of age, who had often sat on Hero's back, and whom the gentle creature loved. When the boy was brought from his home (a distance of a hundred miles), Hero recognized him at once, and bowed his head at his voice. Then the elephant looked wistfully round for his master, but, not seeing him, he obeyed the child and began his homeward march. His back was still draped with the trappings which he had worn on the day of battle: but they were stained and torn; they hid a ghastly wound in his side.

At last the encampment was reached, and Hero began a patient search in every tent for his missing master. Not finding him, he trumpeted forth his bitter disappointment. Then, exhausted with his wound, he tenderly wound his trunk round the orphan boy, and died. His brave obedience had won the battle; his duty was done, and now he might rest.

TWELFTH STORY.

THE FOWLER AND THE DOVES.

Once upon a time there was a wicked fowler. He lived by catching the birds of the woods and selling them as food. One day, while the fowler was wandering in a forest, spreading his nets, a great storm arose. A mighty wind shook the trees, lightning flashed, and rain poured down. The fowler's limbs became stiff with cold, so that he could not move. Lying beside him on the ground he saw a she-dove, also numb with cold and unable to fly. Although he was in the same condition, that wicked fowler, instead of pitying the she-dove, caught her and shut her up in a cage. Soon the sky cleared, and the moon and stars shone out. Then the fowler found that he was beneath a huge forest tree, inhabited by many birds. As he could go no further, he resolved to pass the night under the tree. Bowing down to it, with folded hands he begged the deities of the tree to shelter and protect him. Then he spread some leaves for a bed, lay down, resting his head on a stone, and fell fast asleep. In one of the branches of the tree a beautifully-feathered dove had long lived with his family. That morning his wife had gone in search of food, and had not returned, because the wicked fowler, finding her stiffened with cold in the storm, had caught her, and shut her up in a cage. The cage was now beside the fowler under the tree. As night had come, and his wife had not returned, the dove in the tree began to mourn for her, and to praise her as the best of wives. The she-dove, hearing this, rejoiced exceedingly because her lord praised her. Then she spoke to him, and told him what had befallen her. But she reminded him that, although the

fowler had been cruel to her, and was an enemy of all birds, yet they must be kind to him and show him all hospitality, since he had put himself under their protection and was their guest. The dove agreed with his wife. When the fowler awoke, the dove showed him honour, and asked what he could do for him. The fowler said, "I am stiff with cold ; make me warm." Then the bird gathered together a number of dry leaves. Taking a single leaf in his beak, he flew to a place where there was fire, lighted the leaf, and, returning, set fire to all those dry leaves. Soon there was a great fire, at which the fowler warmed himself. Then he said, "I am hungry ; give me food." Now, the bird had no store of food in the forest, and his face grew pale with shame. But he thought in his heart, "I must not refuse a guest." Rising high in the air, with a smiling face he flew thrice round the fire, and then threw himself into it, to become food for his guest.

When the fowler saw this he was much ashamed, and knew how wicked he was. He threw away his nets and traps and cages, set the she-dove free, and resolved never again to take the life of a bird. The she-dove also cast herself into the flames, and joined her husband in heaven.



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OBJECT LESSONS.

INTRODUCTION.

THE introduction to object lessons in Part I. of this book applies also to the object lessons in this Third Part.

Children in the Second Standard, who have attended the object lessons in the Infant and First Standards, should possess keen and accurate powers of observation and ability to describe what they see with fair accuracy and completeness and they should have a vivid interest in their surroundings. The course in this Part is intended to satisfy this interest and thereby to extend the children's knowledge of form, the human body, familiar natural phenomena and familiar objects, animals, plants and minerals.

FIRST LESSON ON FORM.

ANGLES.

Apparatus.—*For Teacher.* A new pencil and a blunt pencil; an acute angle cut in paper and an obtuse angle cut in paper; a large square of paper and a pair of scissors.

For Children. Slates and pencils and six sticks each.

Teacher. (Holding up the square of paper.) "What shape is this paper?"

Children. "It is a *square* piece of paper."

T. "How do you know that it is a square?"

C. "It has 4 *edges of equal length* and 4 *corners of equal size.*"

T. "Quite right. You remember that last year we measured the edges and corners of some square pieces of paper and found that the edges were of equal length and the corners were all the same size. How many corners are there in the square?"

C. "There are 4 *corners* in the *square.*"

T. "Now that you are growing big and are in Standard II., I shall tell you some more about corners and give you a more difficult name for them. See! I will draw 2 lines on the board, thus. What lines have I drawn?"

C. "You have drawn a standing-up line with a lying-down line touching the end of it."

T. "Where is the corner?"

C. "It is at the *place where the 2 lines meet.*"

T. "Yes. Whenever 2 lines meet they make a corner, and the *right name* for the corner is an *angle*. All say that word together."

C. "*Angle.*"

T. "How many angles are there in a square?"

C. "There are 4 *angles* in a *square.*"

T. "Because these angles are in a square we call them *square angles*. Repeat that name."

C. "*Square angles.*"

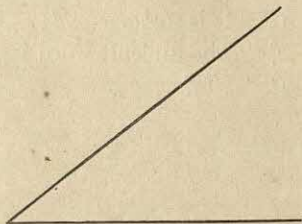
T. "What is a square angle?"

C. "It is a corner or angle in a square."

T. "A still better name for it is a *right angle*. All repeat that."

C. "*Right angle.*"

T. "Point to the *right angles* in this square of paper. Right. Point to the *right angle* on the board. Take your sticks and make a *right angle.*" (Taking up the paper acute angle.) "Now look at this piece of paper. I will pin it up on the board and draw a chalk line round its edges. Now I remove the paper. Look at the two lines I have drawn. What shall we call this place at which the two lines meet?"



C. "It is a corner or *angle.*"

T. "Yes. You see the paper just fits this angle. I will pin it up over the right angle. Does the paper fit the right angle?"

C. "No; it does not fit the right angle."

T. "Is it too big or too small for the right angle?"

C. "It is *too small* for the *right angle.*"

T. "I will cut one right angle out of my large square of paper. Thayar, place these two paper angles together. Do they fit?"

Thayar. "No; *they do not fit.*"

T. "How can I make the right angle fit this other angle?"

C. "You must cut a piece off the right angle."

T. "Well, I will cut a piece off it. Does it fit the other angle now?"

C. "Yes; they fit each other now."

T. "Look at this pencil. Can we write with it as it is?"

C. "No. It must have a sharp point before we can use it."

T. "I will sharpen it with this knife. How did I do it?"

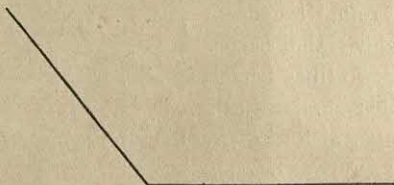
C. "You cut some of the pencil away with the knife."

T. "I did, and to make the right angle like this other one, I cut some of the right angle away with the scissors. I made the angle *sharp*. What kind of angle is this?"

C. "It is a *sharp angle*."

T. "The difficult word is *acute*. Repeat *acute angle*."

C. "*Acute angle*."



T. "Is an acute angle larger or smaller than a right angle?"

C. "An acute angle is smaller than a right angle."

T. "What did I do to the right angle to make it an acute angle?"

C. "You cut some of the right angle away."

T. "With your sticks make an *acute angle* beside your right angle." (Taking up the paper obtuse angle.) "Now, I will pin up this paper over the right angle on the board. Does it fit it?"

C. "No, it is too large."

T. "Amirtham, come and measure this new angle on the paper right angle. Does it fit it?"

Amirtham. "No; the new angle is *larger* than the *right angle*."

T. "Quite right. Look at this pencil that I have just sharpened and then at this other one. What do you notice in this second pencil?"

C. "It is *blunt*."

T. "Now, compare the point of the acute angle and the point of the new angle. What do you notice?"

C. "The point of the *new angle* is *blunt*."

T. "Quite right. The proper word is *obtuse*. *Obtuse* means *blunt*. All repeat this new word."

C. "*Obtuse*."

T. "What kind of angle is this?"

C. "It is an *obtuse angle*."

T. "Each make, with your remaining two sticks, an *obtuse angle*. Now, try to tell me in turn, as I point to you, what we have learned to-day about corners."

C. "The place where 2 lines meet is a corner or an *angle*. The angles in a square are square angles or *right angles*. An angle that is smaller than a right angle is a sharp angle or an *acute angle*. An angle that is larger than a right angle is a blunt angle or an *obtuse angle*."

T. "Very good. Collect your sticks and give them to me. Take your slates and each draw a *right angle*, under that an *acute angle*, and under that an *obtuse angle*."

SECOND LESSON ON FORM.

TRIANGLES.

Apparatus.—*For Teacher.* A right-angled triangle, an obtuse-angled triangle, and an equilateral triangle cut in paper.

For Children. Slates and pencils.

Teacher. "All take your slates and pencils, draw a *right angle* and show it to me. Now draw an *acute angle*; now an *obtuse angle*. Right. What is a right angle?"

Children. "A right angle is an angle in a square."

T. "What is an acute angle?"

C. "An acute angle is smaller than a right angle."

T. "When an angle is larger than a right angle, what name do we give to it?"

C. "We call it an obtuse angle."

T. "What do acute and obtuse mean?"

C. "Acute means sharp. Obtuse means blunt."

T. (Pinning the paper right-angled triangle on the board.)

"Look at this paper. How many edges has it?"

C. "It has *three edges*."

T. "How many angles has it?"

C. "It has *three angles*."

T. "I will draw a chalk line round the edges of the paper. Now I remove the paper. Describe the shape I have drawn on the board."

C. "It has 3 *edges* and 3 *angles*."

T. "Rama, come here and point to the 3 edges and 3 angles. Right. Because this figure has 3 angles, we call it a three-angle, or *triangle*. *Tri* means *three*. All repeat that word."

C. "*Triangle*."

T. "Now let us look at the angles. What kind of angle is this?"

C. "It is a *right angle*."

T. "How can we be sure of this?"

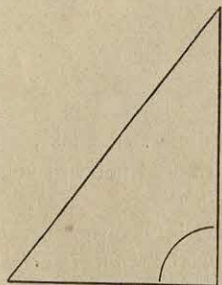
C. "By fitting it on to a right angle."

T. "I will draw a square on the board. Ratnam, come here and fit the paper right angle on to one of the angles of the square. Does it fit?"

C. "Yes; it fits exactly."

T. "What kind of angles are the other two angles?"

C. "They are *acute angles*."



T. "How do you know?"

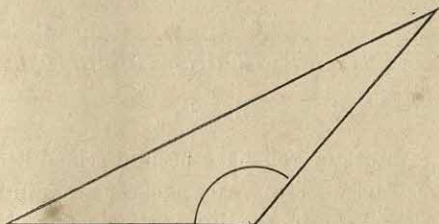
C. "They are smaller than right angles."

T. "Chinnasami, come and fit the paper acute angles on to this right angle in the square. What do you find?"

Chinnasami. "They do not fit. They are too small."

T. "Describe the angles of this triangle."

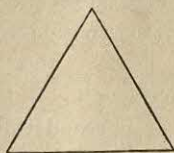
C. "It has *one right angle and two acute angles.*"



T. (Pinning the obtuse-angled triangle on to the board.)
"Here is another triangle. I will trace a chalk line round it also and remove the paper. Gopal, come and measure the paper angles against a right angle in the square. Tell me what you find out about them."

Gopal. "This *triangle has one obtuse angle and two acute angles.*"

T. "Right. Now I will pin up a third triangle on the board, trace lines round its edges thus, and remove the



paper. Watch me while I measure these three angles on the right angle. What do you see?"

C. "Each of these angles is smaller than the right angle. *All three are acute angles.*"

T. "Quite right. Now describe the triangles as I point to them."

C. "The first has *one right angle* and *two acute angles*; the second has *one obtuse angle* and *two acute angles*; the third has *three acute angles*."

T. "Take your slates and pencils and copy these three triangles."

FIRST LESSON ON THE CHILD.

EYES.

Teacher. "Most of you have been at school here now for quite a long time. Two years ago you were in the Infant Standard, last year in the First Standard, and now you know so much and are growing so big that you are in the Second Standard. I want you to tell me some of the things about which you have learned in school."

Children. We have learned about paddy, the cat, the mango, grass, water, the squirrel, baby's cradle, lamps, etc., etc."

T. "Tell me some of the things you have found out about these things."

C. "Paddy and grass are green, they grow out of seeds, they have leaves, flowers and seeds, etc."

T. "With what part of you did you find out that paddy is green, etc.?"

C. "We *saw* with our *eyes*."

T. "Quite right. It is wonderful how much we learn if we look carefully at everything with our eyes. To-day we are going to learn about these useful eyes themselves. Gopal, we looked at many parts of you last year. Come here again; look carefully at Gopal's *eyes* and tell me what you see."

C. "We see a *round dark part* in the middle. On both sides of the dark part is something white."

T. "What shape is the part of the eye that you can see?"

C. "It is egg-shaped or *oval*."

T. "Yes, but we see only a small part of the eye. If we could see it all we should see that it is really a round *ball*. Shut your eyes and feel them with your fingers. You will feel the front of the ball. The right name for it is *eye-ball*. The greater part of the ball is white, like that which you see. It is called the *white of the eye*. Govindu, come and show the white of Gopal's eye. Now look at the *round dark part* in front. What colour is it?"

C. "It is dark *brown*."

T. "What do you see in the centre of the brown?"

C. "We see a *round black spot*."

T. "That little black spot is really a *small round window*, through which the light passes into our eyes and then we see. The round window is called the *pupil* of the eye. The *eye-ball* is *hollow*, so that the light can shine quite to the back of it. Govindu, point to the ring in Gopal's eye. That ring is a little *curtain* called the *iris*. When the light is bright the curtain *draws* itself *close* round the window and allows only a little light to go into the eye. When the light is dull the curtain draws back, making the window large, so that all the light there is may enter the eye. Shade your eyes with your hands. Your *irises* have *drawn back* and your *pupils* are large. Now remove your hands and look quickly into each other's eyes. You will see the *pupils* grow *small* as the *irises* close round them. You know that when the sun is very hot and bright we sometimes hang a purdah at the window to keep out the sunshine. At evening, when the sunshine has gone, we take down the purdah. In the same way each of our eyes has a little purdah of its own, and we call the purdah the *iris*. Each

eye has a little *room* of its own to live in. The *walls* of its room are made of *bone*. Feel with your finger all round your eye, thus, and you will feel these *bony walls*. Inside the bone is a *bed of soft fat*, to prevent the eye from being hurt as it moves about. Can you move your eyes, Gopal? Move them up, down, to the right, to the left; in front. You may all move your eyes up, down, in front, to the right, to the left. How quickly they move.

Besides the curtains in front of the windows of our eyes we have *shutters* also. Gopal, shut your eyes. See! He has shut the *shutters* of his eyes, just as father shuts the shutters of the windows at home at night. *Open* the *shutters*, Gopal. All close the shutters of your eyes. *Open* them. These eye-shutters are called *eye-lids*. When do we shut our *eye-lids*?"

C. "When we go to *sleep*, when the *wind blows* and when the *dust* comes near our *eyes*."

T. "What do you see at the edge of Gopal's *eye-lids*?"

C. "There are little *hairs*."

T. "Yes. They are called *eye-lashes*. They keep dust and wind and bright light out of our eyes. What do you see in people's eyes when they cry?"

C. "We see *tears*."

T. "Yes. The *tears wash* the *eye-ball* and help it to *move smoothly* on its bed of fat. When people are hurt or in trouble too many tears come into their eyes and then the tears fall over the *eye-lids* and we see them. What do you see above Gopal's *eye-lids*?"

C. "We see his *eye-brows*."

T. "These *eye-brows* keep dust and perspiration from falling into the eyes, just as the thatch on the roofs of houses keeps the rain from running down the walls. Now tell me the names of the parts of the eye."

C. "The *eye-ball*, *white of the eye*, *pupil*, *iris*."

T. "Give me the names of the parts round the eye."

C. "Bony walls, bed of fat, eye-lid, eye-lash, eye-brow."

T. "Now tell me all you can of each of these parts."

SECOND LESSON ON THE CHILD.

EARS.

Apparatus. A conch shell, a tom-tom, a bell.

Teacher. "Gopal, come here and let us look at your eyes again. If we think of Gopal as a house, what part of the house are his eyes?"

Children. "His eyes are the windows."

T. "How are his eyes like windows?"

C. "They let in the light; they have curtains called *irises*, and shutters called *eye-lids*."

T. "Do you remember that last year and the year before we found out about some things without using our eyes? Our eyes were shut."

C. "Yes; we touched the things with our hands and found that some were rough and some were smooth, some heavy and some light."

T. "To-day we are again going to make some discoveries without using our eyes. All shut your eyes and then tell me what I do."

C. "You are speaking; now you are singing, you clap your hands."

T. "Keep your eyes shut. Can you tell me anything that is going on outside the school-house?"

C. "The crows are cawing; the wind is blowing, a cart is passing the school."

T. "Now open your eyes. How did you know these things?"

C. "We heard the sounds."

T. "Did you hear them with your eyes?"

C. "No. We *heard* them with our *ears*."

T. "How many ears have we each?"

C. "We have *two ears*, one on each side of the head."

T. "To-day we are going to learn about our *ears*. Look at Gopal's ear and tell me what it is like."

C. "It is *round and curved behind*, and *hollowed* in the *middle*. It is somewhat *oval*."

T. "Do you see anything on my table that is like Gopal's ear?"

C. "Yes. The *shell* is something like his ear."

T. "Feel your cheeks and then feel your ears and bend them and tell me what sort of stuff they are made of."

C. "They are made of a *strong, stiff* stuff. We can *bend* it but, when we leave go, it *goes back* to its *own shape* again."

T. "Quite right. That stuff is called *gristle*. The ear keeps its shape, spread out, like a shell, because it is made of this *stiff gristle*. If it were made of soft flesh like our cheeks it would fall down and cover the opening in the middle of the ear and the sound would not be able to get in. This shell-like ear is the *outer ear*. Look carefully at the opening in each other's ears. What is it like?"

C. "It is like a *hole* or *pipe*."

T. "Yes. It is a *pipe, or tube*, about *an inch long*. At the *inside end* of this passage a piece of *skin* is stretched tightly across like the *skin* on this *tom-tom*. The skin in the ear is called the *drum* of the *ear*. Sundram, come and strike the tom-tom. What happens?"

C. "The *skin shakes* and a *sound* comes from the tom-tom."

T. "I ring this bell. The bell *shakes* and makes a *sound*. The *air shakes* and *strikes* on the *drum* of the *ear*, the *drum shakes* and *carries* the *sound* into the *inside ear* and then we *hear*. Now I will strike the tom-tom again and you shall tell me how you hear it."

C. "The *skin* on the *tom-tom* shakes and makes a sound, the *air* shakes and strikes on the *drum* of our ears, the *drums* of our ears shake and carry the sound to our *inner ears* and then we *hear* the sound of the *tom-tom*."

T. "Very good. Feel all round your ear and you will find that it has also a little room, with bony walls to protect it. Which is the door of that room?"

C. "The *drum* is the *door*."

T. "Quite right. It is a door that must never be opened. You must never push pencils or other things into your ears, for, if the drum is injured, it is very painful and you may become *deaf*. In the little passage to the drum there is *wax*, to prevent insects from getting into the ear. Sometimes there is too much wax and that makes people *deaf*. Doctors can wash out this wax and then the deaf people hear again.

Now tell me all that you can remember of the *outer ear*."

C. "It is made of *stiff gristle* and keeps its *shape*, which is something like a *shell*. In its *centre* is a *little passage* an inch long, which has a *skin* stretched over its *inner end*. There is *wax* in this passage to keep out insects."

T. "When I ring the bell how do you hear?"

C. "The *bell* shakes. It *shakes* the *air* which *strikes* on the *drums* of our ears. The *drum* shakes and carries the sound of the *bell* into our *inner ears*."

THIRD LESSON ON THE CHILD.

THE NOSE.

Apparatus. Jasmine flowers and chrysanthemum flowers, or any two flowers with strong and different scents.

If flowers are not available spices may be used.

Teacher. "To-day we are going to make some discoveries,

without using our eyes, or hands, or ears. Shut your eyes and try to tell me what I carry round in front of you." (The teacher should pass the flowers (or the spices) in front of the children's faces, and then hide them, say under the duster.)

T. "Now you may open your eyes. What did I bring round to you?"

Children. "First you brought *jasmine* flowers and then *chrysanthemums*."

T. "Can you see those flowers in the room?"

C. "No, we cannot see them."

T. "How do you know that we had them here?"

C. "We *smelled* them."

T. "What did you smell them with?"

C. "With our *noses*."

T. "Gopal, come here again and let us look at your *nose*. Tell me where it is and what it is like."

C. "It is in the *middle* of his face, from his forehead to nearly his upper lip. It *stands out* from his face. It is *long*. There are two *holes*, or *nostrils*, at the lower end."

T. "Right. Now *feel* your own *noses*, and try to find out what they are *made of*."

C. "The upper part is *hard*, like the eyes' and ears' rooms. It must be made of *bone*. The lower part is *stiff*, like the outer ear. It must be made of *gristle*."

T. "Quite right. If the lower part were of soft flesh, like your cheeks, what would happen to that part of your nose?"

C. "It would fall together and close up the nostrils."

T. "How many openings are there into an ear?"

C. "One."

T. "How many into a nose?"

C. "Two."

T. "What are they called?"

C. "Nostrils."

T. "Let us see whether we can find out why these two nostrils must be kept open. Each *nostril* opens into a *passage* which runs up through the nose. The *two passages* are *side by side*, with a *wall* of *gristle* between them. They bend backwards and their *inner ends* open into the *throat*. Some of you have seen jugglers put things into their mouths and bring them out at their nostrils, have you not? They can do this because the passages in the nose open into the throat. Now close your *mouths* and tell me how you are *breathing*."

C. "We are *breathing* through our *nostrils*."

T. "What are you breathing in and out?"

C. "*Air*."

T. "How do you know that you are breathing through your noses?"

C. "We can *feel* the *air* passing in and out through our *nostrils*."

T. "You find that you can breathe with your mouth shut and your nostrils open. *Pinch* your *nostrils* so as to close them, and breathe only through your mouths. Can you do so?"

C. "No. It is *difficult*."

T. "How did the *scent* of the flowers get from them into your *nose*?"

C. "The *air* must have carried it."

T. "Yes. When we *breathe* air through our *noses*, we *smell* the *scent* that is in the air. Now, can you tell me why our *nostrils* must be *kept open*?"

C. "Our *nostrils* must be kept open that we may be able to *breathe* and *smell*."

T. "Now tell me all that we have learned to-day about the nose."

FOURTH LESSON ON THE CHILD.

THE MOUTH.

Apparatus. A cake and a mango or some other fruit.

Teacher. "Gopal, will you come out in front of the class once more? What is there in Gopal's face that we have not yet examined?"

Children. "His mouth."

T. "Yes. Can you tell me where it is, and what it is like?"

C. "It is near the *bottom* of his *face*. It is not placed *down* the face, like the nose, but *across* the face. It is *between* the nose and the chin. It has *one opening*, between *two red parts*."

T. "Good. Those *two parts* are called *lips*. The top one is the *upper lip*, and the other is the *lower lip*. Gopal, open your mouth. What do you see now?"

C. "We see his *teeth*. They are *white* and *shining*."

T. "How are the teeth placed in his mouth?"

C. "They are placed in *two rows*, an *upper row* and a *lower row*."

T. "Yes. Those parts of the mouth which hold the teeth are called the *gums*; the parts where the gums and teeth are, are called the *upper jaw* and the *lower jaw*. Gopal, open and shut your mouth several times. Which jaw does he move?"

C. "He *moves* his *lower jaw*."

T. "Each try to keep your lower jaws still and move your upper jaws. Can you do it?"

C. "No, we cannot move our upper jaws."

T. "Each take your chin in your hand, and open and shut your mouth. Does your chin move?"

C. "Yes; our *chins move*."

T. "The *chin* is fastened by *joints* in front of the ears to the other bones of the face. If you place your fingers here while moving your jaw, you will feel the joints. They enable the *lower jaw* to *move* up and down, as the *lid* of a box *moves* on its *hinge*. Why does the jaw move up and down?"

C. "To help us to eat our food."

T. "Yes. When we are eating, the *top and bottom rows* of teeth *come together*, and *bite* and *chew* our food. Suppose I gave you this cake to eat, how would you begin?"

C. "We should *bite a piece out*."

T. "Right. And then what would you do?"

C. "We should *chew* the bitten piece of cake and *swallow* it."

T. "Now, Gopal, show us your teeth again. Look at his *front teeth*; they are long and flat, with *sharp, cutting edges*. They can *bite* well. Look at his *back teeth*, and feel your own with your tongues. They are *large and broad*, with *square, flat tops*. They can *grind* and *chew* well.

"Gopal, show us your *tongue* for a moment. What is it like?"

C. "It is *red, long, rather flat*, and *pointed in front*."

T. "Each move your tongue about in your mouth, and feel it. What do you think it is made of?"

C. "It is *soft*, like our cheeks."

T. "Yes. It is made of *flesh*. It is fastened to the back of your mouth, but except for that it *moves* about quite freely. Try to speak without moving your tongue. Can you do so?"

C. "No, we cannot."

T. "What is the *use* of the tongue?"

C. "It helps us to *speak*."

T. "If I gave you this mango to eat, what part of your mouth would tell you its *taste*?"

C. "Our *tongue* would tell us."

T. "Yes. You see, the *tongue* enables us to *speak* and to *taste*. Now, you shall tell me all that you can remember about the *mouth*."

FIRST LESSON ON NATURAL PHENOMENA.

THE SUN.

NOTE.—This lesson should be given on a day in the hot season.

Teacher. "When we are out in the playground or in the street, and look high up over our heads, what do we see there?"

Children. "We see the *sky*."

T. "What is the sky like?"

C. "It is *blue*."

T. "What *shape* does it seem to be?"

C. "It is *curved*."

T. "Yes. It is like a *high, curved, blue roof*. Where does it seem highest?"

C. "It seems *highest over our heads*."

T. "Where does the *curve* seem to end?"

C. "It seems to *bend* down until it *touches* the *earth on all sides*."

T. "When we look up into the sky in the day, what do we see there?"

C. "We see the *sun*."

T. "What do we see in the sky at night?"

C. "We see the *moon* and *stars*."

T. "To-day we are going to learn about the *sun*. What is it like?"

C. "It is *large* and *round*. It is *yellow* like *gold*, and it *shines brightly*."

T. "What does the sun *give* us while it shines so brightly up in the sky?"

C. "It gives us *light* and *heat*."

T. "Yes. How *light* and *warm* this room is. Where do the light and warmth come from?"

C. "They *come* from the *sun*."

T. "Is the sun *always* in the sky?"

C. "No. In the *evening* and *night* it is *not there*."

T. "How many of you saw the *sun rise* this morning?"

C. "I did, I did."

T. "*Where* did it rise, and what did it look like?"

C. "It rose up, as if from the ground where the sky seems to touch the earth. It was round and bright."

T. "All go quietly to the door, and tell me where the sun is now."

C. "It is *high over our heads*."

T. "Where will the sun go this *evening*?"

C. "It will *sink down out of sight*."

T. "I think you have learned, in your geography lessons, the names of the places where the sun rises and sets."

C. "Yes. The *place where the sun rises* is called the *East*. The *place where it sets* is called the *West*. The *West* is *opposite* to the *East*."

T. "All point to the *East*. Now point to the *West*. Right. You have told me that the sun gives us warmth and light. What does it do for our *flowers*, *fruit*, and *grain*?"

C. "It causes the *flowers to blossom*, and *ripens the fruit and grain*."

T. "Quite right. Now tell me all you have learned about the sun."

SECOND LESSON ON NATURAL PHENOMENA.

CLOUDS AND RAIN

NOTE.—This lesson should be given on a cloudy, and if possible a rainy, day in the rainy season.

Apparatus. A fire, a chattie of boiling water on the fire, a screen to hide these from the children at first; a slate and a stick.

Teacher. "Some time ago we had a lesson about the *sky* and the *sun*. What do you notice about the *sky* to-day?"

Children. "It is *dark* and *grey*. We cannot see the sun to-day."

T. "What is *hiding* the *sun* from us?"

C. "The *clouds* in the *sky* are *hiding* the *sun*."

T. "Yes. What is *falling out* of these *clouds*?"

C. "*Rain* is falling."

T. "I am sure you would like to know what *clouds* are made of and how the *rain* falls, so I have made a little cloud for you. I will move this screen. What do you see?"

C. "We see a *fire* and a chattie full of *hot water*."

T. "What is *rising* from the *hot water*?"

C. "*Steam* is rising."

T. "Yes. That *steam* is made of some of the *water* in the chattie. When *water* is made very *hot* it changes into *steam*. The *steam* is a little cloud. Where does the *heat* come from that is changing the *water* into *steam*?"

C. "It comes from the *fire*."

T. "Thayar, pour some water on this slate and hold it in front of the fire. What happens?"

C. "*Steam* is rising from the *slate*."

T. "Yes. Another little cloud is being formed from the *water* on the *slate*. Now the cloud has disappeared. Why?"

C. "The *slate* is *dry*. There is no more *water* to make the *cloud*."

T. "Suppose the sun were shining brightly to-day and we put the *wet slate* in the *sunshine*. What would happen?"

C. "The *slate* would get *dry*."

T. "Why would it get *dry*?"

C. "Because the *water* would *change* into *steam* and *rise* up as a *cloud*."

T. "What would change the *water* into *steam*?"

C. "The *heat* of the *sun*."

T. "Quite right. That is what the heat of the sun does every sunny day. The *sun* *shines* down on the *tanks* and the *ivers*. Its *heat* *changes* some of the *water* in the *tanks* and *ivers* into *steam* and the *steam* *rises* up into the sky as *clouds*. How did our river look last hot weather?"

C. "It was *quite dry*; there was no *water* in it; we walked across it."

T. "Yes. The heat of the *sun* changed all the river's *water* into *steam*; it all rose into the sky as *clouds* and there was *no water* left in the *river*." Now I will take this *cold slate* and hold it over the *steam*. What do you see on the *slate*?"

C. "We see *drops* of *water* on the *slate*."

T. "The *cold* of the *slate* has turned the *steam* into *water*. What did the heat of the *fire* do to the *water*?"

C. "The *heat* of the *fire* turned the *water* into *steam*."

T. "What did the *cold* of the *slate* do to the *water*?"

C. "The *cold* of the *slate* turned the *steam* into *water*."

T. "Right. Exactly the same thing happens with a *cloud*. When a *cloud* gets *cold* it *changes* into *water* again and *falls* down to the *earth* as *rain*. Generally *rain* falls in *drops*. I will dip this stick into this chattle of *water*. Look! there is a *little drop* of *water* hanging at the end of the stick. What is the *shape* of the *drop*?"

C. "It is *ball-shaped*."

T. "I shake the stick and the *drop* of *water* falls off. Rain generally falls in *little round balls* of *water* like this. We call them *rain-drops*. What drops of water did you sing about last year?"

C. "We sang the song of the dew-drops."

T. "Quite right. Dew-drops and rain-drops are very much like each other. What is the *use* of *rain*?"

C. "Oh, it is of great use! It *fills* the *tanks* and the *rivers* and the *wells*. *We* and the *cattle* have enough water to *drink*. It makes the *corn* and the *vegetables* grow."

T. "Quite right. In this hot country rain is one of the best things we have. One day soon I will teach you a beautiful song about the blessing of rain."

FIRST LESSON ON FAMILIAR ANIMALS.

FISHES.

Apparatus. A live fish in a bowl of water (preferably a glass bowl) and a few scalloped pieces of paper.

Teacher. "A few days ago I told you a story about three fishes. Do you remember their dispositions?"

Children. "One had great forethought, the other had great presence of mind, and the third put off doing everything until the last moment."

T. "Right. Now look into this bowl. What is there in it?"

C. "Oh, it is a beautiful live fish!"

T. "Look at it carefully, and describe it."

C. "It is *long* and *flat* and rather *oval*. It has a *tail* divided into *two parts*, a *large mouth* and *two eyes*. It has *no legs* or *arms*."

T. "Birds have no arms. What has the crow instead of arms?"

C. "The crow has wings instead of arms."

T. "Has the fish wings?"

C. "No, but it has some funny things, something like wings."

T. "Yes. Those are *fins*. You see it constantly moves them and its tail. The *fins* and the *tail* help the *fish* to swim. What is the crow covered with?"

C. "With feathers."

T. "What sort of coats have the squirrel and the monkey?"

C. "The squirrel's and monkey's coats are made of fur and hair."

T. "Look closely at the fish. What is it covered with? You cannot tell. Its *coat* is made of many *thin plates*, something like thin horn. These *plates* have *curved edges*, and lie over one another, like these pieces of paper. They are called *scales*, and they make a nice strong smooth *coat* for the fish. They are *slippery* also, and help the fish to *glide* through the water. Feel your hands, and tell me whether they are warm or cold?"

C. "They are *warm*."

T. "Do you remember what there is in our body which is warm?"

C. "There is *warm blood*. It is carried all over our bodies in little pipes."

T. "Quite right. Now, it is a wonderful thing that the *fish's blood* is not warm, but *cold*. If you were to touch this fish its body would feel cold to you. Shall I take it out of the water and let you touch it?"

C. "No. If you take it out of the water it will die."

T. "Quite right. Fishes cannot live unless they are in water. What happened to the procrastinating fish,

when the fisherman caught it and took it out of the water?"

C. "It died."

T. "What do fishes *eat*? You do not know? Their *chief food* is *fish*. The big fishes eat little fishes, and the little fishes eat the *eggs* of other *fish*. Now you shall tell me all that you have learned about the fish, and how it is suited to its home in the water."

FIRST LESSON ON COMMON OBJECTS.

A NET.

Apparatus. A fisherman's net or portion of one, a little raw cotton. Some thread wound on a bambu stick, a small piece of netting fastened on a larger bambu stick, ready for working. A small round bambu stick on which to form the stitches. A leaden weight like that fastened to nets. All these things may be borrowed from a fisherman, who will also, in a very short time, show the teacher how to net. The stitch is simple and easily learned.

Teacher. "In the story of The Three Fishes, which I told you the other day, what happened to the procrastinating fish?"

Children. "The fishermen caught it, with many others, and it died."

T. "What do fishermen catch fish with?"

C. "With a *net*."

T. "Yes. Here is one. What is it like?"

C. "It is *brown*. It is full of *holes*. It is made of *threads*."

T. "The *fisherman* makes his *thread* in this way. He takes some *raw cotton*, like this, and *rolls* it between his

hand and his thigh thus, until he has some *very fine cotton threads*, like these. Next he takes *several* of these *threads* and *twists* them together in his hand, thus, and makes a *thicker thread*. Sometimes he twists 3 fine threads together, sometimes 6 or 7. Here is a *net just begun*. To what is it tied ?”

C. “It is tied to a *stout bambu stick*.”

T. “Yes. This *thread*, wound on a smaller bambu stick, called a spool, is to make the *web*, and this *small round bambu stick* is the one on which the *stitches* are formed. I will *net one row* of *stitches* to show you how it is done. You see I pass my *spool of thread* through the *first loose hole*, draw it to the little round *stick*, and *hold* it there with my left *thumb*. Then I *pick up one thread* of this hole and *one thread* of the last hole, and *fasten them together* by making a cast-over *knot* of thread *round them*, and so on with every hole to the end of the row. This is how the fishermen make their nets.

“When the net is finished, its *shape* is something like that of a *tent* or a *bell*. Small leaden *weights*, like this, are fastened to its *edges*, and *cords* are fastened from the *top* of the net to its *edges* here and there.

“When the fisherman *throws* his net into the river or tank, he does it so cleverly that it *spreads out* like a bell, and the weights at its edges help to keep it that shape. When there are *many fish* in the net, the fisherman *pulls* its *cords*. The *cords* *pull* the *bottom edge upwards*, so that a sort of *bag* is formed, from which the fish cannot escape. Then the fisherman *pulls* the *net to land* and secures the fishes.

“Now tell me all that you can remember of the fisherman’s net.”

NOTE.—After this lesson the teacher should, if possible, take the children to watch fishermen at work. The children will be interested to see them making, mending and throwing nets, and catching fish.

THIRD LESSON ON NATURAL PHENOMENA.

THE WIND.

NOTE.—If possible this lesson should be given on a windy day.

Apparatus. A fan.

Teacher. "I told you the other day about the Sāl Tree and the Wind. To-day you may tell me that story again. Very good. Do you think that the *Lord of the Wind* is abroad to-day?"

Children. "Yes, he is."

T. "What makes you think that? Can you *see* him?"

C. "No; we cannot *see* him, but we can *hear* him."

T. "Yes. Just listen! What is he doing?"

C. "He is *rushing* through the village; he is *bending* the trees and *tossing* their branches; he is *rattling* the doors and windows of our school-house."

T. "What did he do to you as you came to school this morning?"

C. "He *snatched* our caps off our heads; he *blew* our clothes about; he blew so that we could hardly walk or run."

T. "But you could not *see* him. How did you know he was there?"

C. "We *felt* him; he *pushed* against us; we *felt* him *blowing* against us."

T. "Then there are two ways in which you know the wind is there. What are they?"

C. "We can *hear* and *feel* the wind."

T. "Rukmani, go to the window and tell me what the wind is doing now."

Rukmani. "He is *blowing* the *dust* down the street."

T. "So, though you *cannot see* the wind, your eyes do help you to know whether the wind is there or not?"

C. "Yes, we cannot see the wind, but we *can see what the wind does.*"

T. "What is the wind made of? You do not know. Move your hands quickly backwards and forwards. What do you feel?"

C. "We *feel a little wind.*"

T. "I will come round the class and *fan* you. What do you feel?"

C. "We *feel the air moving*; it is like a *little wind.*"

T. "Right. *Wind is air.* When you were learning about the nose, what did you find out about air?"

C. "We breathe in air through our nostrils and mouth."

T. "Yes. All stand and take a deep breath. Can you feel the air?"

C. "Yes. It rushes up our nostrils and out again."

T. "There is *air everywhere*; in this room and in every room, in the playground, in the streets, *everywhere.* When the *air is still* we do not *hear* it nor *feel* it, nor *see* what it *is doing.* When it *moves* we *hear* it and *see* what it *does.* We call *moving air wind.* What is the use of *wind*?"

C. "It *cools* us."

T. "Yes. When the day is very hot and sultry, how glad we are when a *cool wind* springs up and *cools* us. It carries away the hot, bad air and brings pure, cool air to us. All go to the doors and windows, look up in the sky, and see what the wind is doing there."

C. "It *is moving the clouds.*"

T. "Yes. That is one very useful thing that the wind does. It *brings* us the *clouds* and the *clouds bring* us the *rain.* Also it *drives* away the *clouds* and *dries* up the *ground* after the rain. So you see that, though the poor boastful *sāl* tree was so afraid of the wind, yet the wind does a great deal of good. Now tell me all that you have learned about the wind."

SECOND LESSON ON FAMILIAR ANIMALS.

THE SPIDER.

Apparatus. A black-board sketch of a spider and its web.

Also, if possible, a live spider.

Teacher. "I told you, the other day, a story of Muhammad and his followers, fleeing from their enemies. Where did they hide?"

Children. "Muhammad and his followers hid in a cave."

T. "Why did not their enemies follow them into the cave?"

C. "The enemies saw a *spider's web spun across the entrance* of the *cave*, and a dove sat on her nest there, so the enemies thought that there could be no one in the cave."

T. "Very good. To-day we are going to learn about the *spider*. Look carefully at this one, and at the picture on the board, and describe the spider."

C. "It is a *small creature*. It is *divided into two parts*, a *head* and a *body*. It has *8 legs*, *4 on each side*. It has *2 horns* and *2 large eyes*."

T. "You are quite right, except about the horns and eyes. What look to you like horns are a pair of *strong claws*, and what looks to you like one eye is really *6 or 8 eyes*. If the spider has *6 eyes* on one side, how many has it altogether?"

C. "It must have *12 eyes*, *6 on each side*."

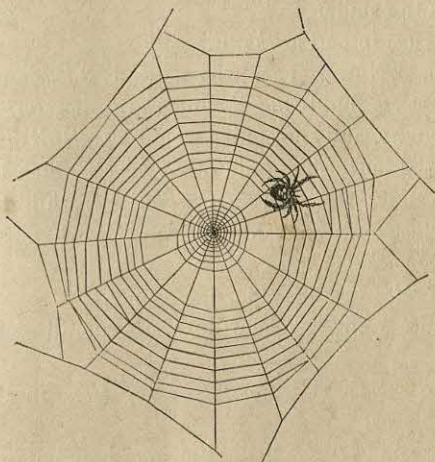
T. "It has. Some spiders have *16 eyes*, *8 on each side*. Now, let us consider why the spider needs so many legs and eyes. Can you tell me what the spider eats?"

C. "He *eats flies* and other *insects*."

T. "Yes. How does he *catch* them?"

C. "He *catches* them in his *web*?"

T. "Do you know how the spider makes his web? No. I will tell you. It is one of the most wonderful things about this wonderful spider. Gopal, show me the spider's *body*. On the under side of this *body* are *four tiny pipes*. Each pipe has *1000 little holes* in its end. Out of each hole the spider sends a *tiny thread* made of *gum*, which *dries* and *hardens* in the air. The spider's *hind feet* are made like a pair of *combs*. With these combs the spider *gathers* together all the *threads*, and *twists* them into a *bigger thread*. With *that thread* it *spins* its *web*. How many of you have seen a spider's web? Are the threads in it fine or course?"



C. "They are *very fine*, like the *finest silk*."

T. "Yes; and yet each one is made up of so many finer threads. How many holes are there in the spinning pipes?"

C. "One thousand holes."

T. "How many spinning pipes has the spider?"

C. "Four."

T. "If a thread comes out of every hole, how many threads come out altogether?"

C. "*Four thousand threads!* Oh, what a number!"

T. "Yes. Just think of it! The *fine threads* in the spider's web is made of *4000 thinner threads!* Is not the spider a *clever spinner!* His web is even more wonderful than the fisherman's net. Here is a picture of a spider's web that I have drawn on the board. Try to describe it."

C. "*Some threads* go from the centre to the outside, like the *spokes of a wheel.* They are fastened to some *threads outside.* Other *threads* go round and round like the *outside of a wheel.*"

T. "Good. When a poor fly is caught in this web, what does the spider do?"

C. "It *runs in and catches it.*"

T. "Yes. Now you see why it needs *6 legs* and *12 eyes.* If it did not *see the fly quickly* and *run to it very fast* the fly would *get away,* and the spider would *lose its dinner,* for the flies, and the butter-flies, and other *insects* which the spider eats, have *wings,* they can *fly away quickly,* while the spider has only *legs,* but *he has 6 of them.* Of what *use* are the spider's *sharp claws?*"

C. "To *catch the insects* for his dinner."

T. "Quite right. Where do you generally see spider's webs?"

C. "We see them in *houses,* on the *trees,* in the *hedges,* and on the *grass.*"

T. "Do you ever see little *dew-drops* hanging on them?"

C. "Oh yes, and, when the sun shines, the *dew-drops* sparkle like *diamonds!*"

T. "They do, and they look very beautiful. Dew-drops not only *sleep on bambu leaves,* but they *hang and sparkle* on spiders' webs. When do you see many insects flying about in the air?"

C. "Just after sunset."

T. "Yes. If you all meet me here to-morrow evening,

half an hour before sunset, we will go and watch the spiders in their webs. We shall find them mending their webs, and making ready to catch their supper. All look about this evening and see where the largest webs are, and to-morrow evening we will visit them."

FIRST LESSON ON FAMILIAR PLANTS.

TREES.

Apparatus. A betel-nut, leaf of the betel palm ; leaf and pod of the tamarind tree ; leaf and fruit of the margosa, *i.e.* the nīm tree ; a bough with leaves and fruit of the banyan tree ; a sprig of bambu ; mango leaves, and a mango and pīpul leaves.

Teacher. "Last year you had a lesson on a tree, and the other day I told you the story of the Sāl Tree and the Wind. Name all the parts of a tree."

Children. "The roots, trunk, branches, twigs, leaves, and flowers."

T. "Kaveri, describe the sāl tree as it looked before it became vain."

C. "It was hundreds of years old. Its trunk was very large. Its branches spread far out on all sides. They were loaded with leaves, flowers, and fruit."

T. "Very good. To whom was the tree very kind and useful ?"

C. "Birds lived happily on its boughs. Tired elephants, travellers, and even holy Saniyasis rested in its shade."

T. "Yes. That sāl tree was a home to many, before it grew boastful. To-day we are going to learn about some other beautiful and useful trees. Who can tell me what this is ?"

C. "It is a *betel-nut*. Mother and aunties *chew* that nut."

T. "Have you seen it growing? No? It grows on a tree with a *tall slender trunk*, something like a cocoanut tree. Here is one of the leaves. What is it like?"

C. "It is like a very large *feather*."

T. "These *feathery leaves* all grow together, in a bunch, at the *top* of the *tall thin trunk*. Here is another tree's leaf. This tree has a large *strong trunk*, like the mango tree. Its *branches spread out* on all sides. It is the *tamarind* tree. Describe its *leaf*."

C. "It is made of a *number* of *little leaves*, in *two rows*, one row on *each side* of a *little stalk*."

T. "Quite right. Here are the *seeds* of the *tamarind*. What are they like?"

C. "Oh, we have seen them before! When we were in the Infant Class we made pictures with them, but we never saw them in this *case* before."

T. "This *case* is a sort of *cradle* for the *baby seeds*. It is called a *pod*."

"What fruit is this? Describe it."

C. "It is a *margosa fruit*. Its *outside* is *green* when it is *unripe*, and *yellow* when it is *ripe*, it *smells nice*. It *tastes half sweet half bitter*."

T. "Yes. It grows on the *margosa* or *nīm tree*. Here is a *leaf* from that tree. Describe it."

C. "It is made of two rows of small leaves, one row on each side of a stalk. The small leaves are larger than the small leaves of the *tamarind*."

T. "Here are other leaves and fruit. I think you know them."

C. "Oh yes. That bough is from the village *banyan tree*."

T. "Tell me about it."

C. "The *leaves* are *dark green* and *glossy*; the *fruit* is *red*, like coral. All the birds and squirrels love it. In the

early morning they come to eat it, and they chirp and caw and fight, and there is a great noise in the banyan tree."

T. "Is the *banyan tree* big or little?"

C. "It is *very big*. *Roots grow out of its branches, like trunks*. It is so big that tents are pitched under its branches."

T. "Yes. Some *banyan trees* are so *big* that the tents of *whole armies* are pitched under them. Here is another old friend of yours."

C. "The *bambu*! Yes, we know the *bambu* very well. The dew-drops sleep on its leaves. The shepherd's pipe is made of a *bambu* stem."

T. "Do you know these?"

C. "Yes, indeed we do! That is a *mango*, and those are the *leaves* of a *mango tree*."

T. "Describe them."

C. "The *mango* is *large* and *yellow* or *red*; it is *nice* to eat, its *shape* is *oval*. The *leaf* is *long* and *narrow* and *green*."

T. "When a number of trees grow together what do we call them?"

C. "We call them a *tope*."

T. "What birds live in *mango topes* and eat the mangoes?"

C. "*Crows*."

T. "Here are some more leaves. What are they like?"

C. "They are *round*, with *long points*, and their colour is *bright green*."

T. "Yes. These are the leaves of the *pipul tree*. When it is old it is strong and big like a *giant*."

"Now I will show you the leaves and fruit of these seven trees once more, and you shall tell me all that you can about each tree. Very good. Now I want you to look all about our village and its neighbourhood, and see whether these seven trees grow here. When you have found all that you can, I will come and visit them, and see whether

they are the trees about which we have been learning. You shall also learn a beautiful song about these trees.

SECOND LESSON ON COMMON OBJECTS.

THINGS MADE OF WOOD.

Apparatus. A wooden box with dove-tailed corners, an axe, a saw, plane, chisel, hammer, nail, and glue.

Teacher. "Look round the room and name all the things that are made of *wood*."

Children. "The *benches, table, black-board, door, door-frame, shutters, window frames, etc.*"

T. "Last year we had a lesson on a thing that was made of *wood*. What was that?"

C. "A *cradle*."

T. "Where do we get wood from?"

C. "We get it from the *trunk and branches* of trees."

T. "Does a man who wants a piece of wood climb up a tree and cut off a piece?"

C. "No, he *cuts down* the whole tree. You took us to see some men cut down a tree."

T. "What sort of men were they?"

C. "They were *coolies*."

T. "How did they cut down the tree?"

C. "They *cut it* on one side with *axes*, and at last the tree fell down."

T. "What did they do next?"

C. "They *chopped off* the *branches* of the tree. Then they took the *trunk and big branches* to the *sawyer*."

T. "We paid a visit to the sawyer. What did you see there?"

C. "We saw a *deep pit*. The *trunk* of a *tree* was laid across the *top* of the *pit*. One man stood at the *bottom* of the

pit and one on the trunk. They pushed a large saw up and down, and sawed the trunk into pieces."

T. "Very good. Who took the pieces of wood from the sawyer?"

C. "The carpenter took them."

T. "Yes, it is the carpenter who makes the pieces of wood into boxes, tables, benches, etc. First he divides his large piece of wood into smaller pieces with a saw, like this one. Next he smooths the wood with a plane like this. Then he shapes the wood with a chisel like this, and with other instruments. Finally he fastens the pieces of wood together. Can you tell me anything that he uses for this?"

C. "He uses nails and glue."

T. "Look at the benches on which you are sitting; you will see that parts are joined by nails and glue. Sometimes the carpenter uses wooden pegs instead of nails. Sometimes he joins two pieces of wood in a very clever manner. Look at this box where the front and the side are joined. You see the carpenter has cut a hole in one piece of wood and a peg the same shape and size as the hole in the other piece of wood. He has put the peg into the hole, and it fits it exactly, so that it holds the side and front of the box together. A join like this is called a dove-tail. During the next few days I want you all to examine the furniture, doors and windows in this room, and find out how the carpenter has joined the pieces of wood in them."

THIRD LESSON ON FAMILIAR ANIMALS.

THE PARROT.

Apparatus. A live parrot in a cage, sketches of the head and foot of a parrot. A crow or drawings of the crow's foot and beak.

Teacher. "Before we begin this lesson I want you to tell me how the pieces of wood are joined together in the furniture, doors, and windows in this room." (When the children have told all that they have been able to find out, the teacher will proceed.) "Where do we get wood?"

Children. "We get wood from trees."

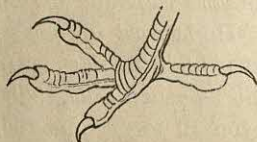
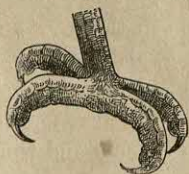
T. "I lately told you the story of The Parrot and the Forest Tree. Jeevamani, what sort of bird was that parrot?"

Jeevamani. "It was a *loving* and *grateful* bird. It would not *forsake* the *tree* even when the *tree* was *withered up*."

T. "Yes. To-day you are going to learn about the parrot. Look at the one in this cage and describe it."

C. "It is covered with *green*" (or other bright-coloured) "*feathers*. It has *two wings*, a *tail*, *two feet*, *two bright eyes*, and a *beak*."

T. "What *difference* do you see between the *parrot's foot* and the *crow's foot*?"



C. "The *crow* has *three toes* in *front* and *one* behind. The *parrot* has *two toes* in *front* and *two* behind."

T. "Now tell me the *difference* between their *beaks*."

C. "The *crow's beak* is *straight* and something like a *cone*. The *parrot's beak* is *round* and *hooked*."

T. "Where do you see parrots?"

C. "We have them at home in *cages*, and we see them in the *trees*."

T. "What do they do in the trees?"

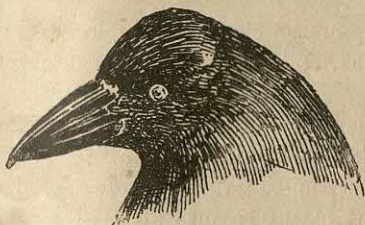
C. "Sometimes they fly a little way. Generally they *climb* from *one branch* to *another*."

T. "How does a *parrot climb* in the trees and in cages?"

C. "It *takes hold* of a *branch* or *stick* with its *beak*, *pulls* itself *up* by its *beak*, *takes hold* of the *branch* with *one foot* and then with *both feet*."

T. "Does it climb quickly, like squirrels and monkeys?"

C. "No, it *climbs slowly* and *carefully*."



T. "Now you see why the parrot has *two toes before* and *two behind* and a *strong hooked beak*. They help it to climb. Many of you have, as you say, parrots at home. What can they do?"

C. "They can *speak*. We can teach them to say different things."

T. "Yes. That is because they have *round, fleshy tongues*, something like our own tongues, and they have *good memories*. Tell me some things that your parrots can say. What do parrots *eat*?"

C. "They eat *fruit*, such as mangoes and plantains."

T. "How do they put their food into their mouths?"

C. "Often the parrot *stands on one foot* and *puts* the fruit to its *mouth* with the *other foot* as if the foot were a *hand*."

T. "The parrot in the story was *loving* and *grateful*. Are your parrots loving?"

C. "Generally they *like us* because *they know us*. They like us to *scratch their heads* and to *talk to them*. They dislike strangers and sometimes bite them."

T. "Now tell me all that you have learned about parrots."

FOURTH LESSON ON FAMILIAR ANIMALS.

THE ELEPHANT.

Apparatus. A picture of the elephant; a black-board sketch of the trunk, and (if possible) one or more things made of ivory.

Teacher. "The other day you heard the story of 'The Elephant Hero.' What kind of creature was he?"

Children. "He was *brave*, and *obedient*, and *loving*. He would not move, after the battle, because his master, who was dead, could not give the order."

T. "Yes. To-day you are going to learn more about the *elephant*. Look at this picture and describe it."

C. "The *elephant* is *black* and *very large*. He has 2 *large ears* like fans, *small eyes*, a *long trunk*, and 2 *long sharp tusks*, rather a *short tail*, and 4 *thick legs*, like pillars."

T. "Right. Its *skin*, besides being black, as you say, is very *thick*. What are the *strangest* things about the *elephant's* appearance?"

C. "Its *size*, *trunk*, and *tusks*."

T. "Right. The elephant is the *largest animal* in the world. He is nearly twice as high as a tall man. His *trunk* is a most wonderful part of him. What sort of *neck* has the elephant?"

C. "Very *short*. He has scarcely any neck."

T. "With that *short neck* and those *tusks* the elephant could not *put his head down* to the ground to eat *grass* or

leaves, nor to a *river* or *tank* to *drink* water ; so that, if it had no trunk, it would soon die of hunger and thirst. For what purposes does the elephant use its trunk ?”

C. “It *puts food* and *water* into its *mouth*, and *picks up* things with its *trunk*.”

T. “Yes. The *trunk* is like a *hand* to the elephant. I will draw the trunk large on the board that you may see



(a) TRANSVERSE SECTION OF TRUNK, SHOWING THE TWO NOSTRILS THAT RUN UP IT.

exactly what it is like. This *finger-like organ* at the end of the trunk enables the elephant to pluck a *single blade of grass* or a *single leaf*, and the great *strength* of the *trunk* enables it to *uproot* trees and to *carry* heavy logs of wood. What *food* does the elephant eat ?”

C. “It *eats grass* and *leaves*.”

T. "What have we on our faces where the elephant has a trunk?"

C. "We have *noses*."

T. "Yes. The elephant's *trunk* is also his *nose*. There are two long nostrils running side by side up its trunk, just as our nostrils run side by side up our noses. What do we *do by means* of our *noses*?"

C. "We *breathe* and *smell*."

T. "The elephant *breathes* through its trunk. On hot days he loves to sink down in the water of a river, leaving only the *tip* of his *trunk* above the water. Why does he keep the tip of his trunk above the water?"

C. "So that he may *breathe*."

T. "Now look at the elephant's *tusks*. Describe them."

C. "They are *yellow*, *long* and *pointed*."

T. "Yes. They are made of a *hard*, *bony substance*, like our teeth. It is called *ivory*, and is very valuable. Here are some *things* made of *ivory*. Have all elephants tusks? You do not know. In India, *only male elephants* have *tusks*; the females have none. A pair of elephant's tusks can be sold for more than Rs. 500, the ivory in them is so valuable. Elephants use their *tusks* when fighting. Look at the elephant's body and head, and try to tell me why he requires such *stout*, *strong legs*."

C. "The elephant's *body* and *head* are very *large*. They must be *heavy*. Its *legs* must be *strong* to *carry* the *body* and *head*."

T. "Very good. You see that the elephant's *feet* are also very *large*. The *hoof*, which surrounds the foot, is made of a number of *horny springs*, something like the springs in a carriage. This enables the elephant to *walk lightly* and *noiselessly*. Although he is so big and clumsy looking, the elephant can *walk* through the thickest forest *without making* the *slightest noise*. In this way he

often *escapes* his *enemies*, including hunters, who would catch him.

“Of what use are elephants to men?”

C. “Rajahs, rich people, and hunters *ride* on them. They are kept in *temples*.”

T. “Right. Also, elephants are so clever that they can be trained to *work*. They carry heavy logs and trunks of trees, and the heavy baggage and tents of armies, and the materials for roads, walls, and bridges. They go into battle too, as you heard in the story of Hero. Elephants are very *useful* and very *obedient*, *gentle* and *loving*. They are very *fond* of their *young ones*. If an elephant fears any danger for her baby-elephant, she *seizes* it in her *trunk*, and places it *between her fore-legs* for *safety*. Now, tell me all that you remember about the elephant.”

THIRD LESSON ON COMMON OBJECTS.

COTTON CLOTH.

Apparatus. A small piece of coarse cotton cloth (dungery is the best) for each child and the teacher; a paper mat and loose strips of paper such as are used in paper-weaving, a finished paper mat, and a little raw cotton.

Teacher. “Manikam, what a nice clean sari you are wearing to-day. All look at your saris and jackets and feel them. Can you tell me what they are made of?”

Children. “They are made of *cotton*.”

T. “Right. I will give you each a piece of *cloth* made of *cotton*. What difference do you see between it and your sari?”

C. “It is *rough* and *coarse*. Our saris are *soft* and *fine*.”

T. "Each of you may pick out the edge of the coarse cloth, as I am doing. What do you find?"

C. "We pull out *threads*. It is made of *threads*."

T. "Yes. Do all the *threads* run in the *same direction*?"

C. "No. Some go *along* the cloth and others go *across* the cloth."

T. "What do you make that are something like this cloth?"

C. "Oh, our paper *mats* are like it! The *fixed strips* go *along* the mat and we weave the *loose strips* *across* the mat."

T. "How do you weave the strips?"

C. "We put a *loose strip* *over* and *under* *fixed strips* again and again."

T. "Look at the threads in your piece of cloth. How are they arranged?"

C. "They go *over* and *under*, *over* and *under* each other, like the strips in our mats."

T. "Quite right. Here is one of your finished mats. Is it not something like your piece of coarse cloth, and are not the strips of paper in this unfinished mat something like the threads that you have pulled out and the ones that you have left in the cloth?"

C. "Yes, they are."

T. "So you see you have been little *weavers* all this time, but you *wove* *paper* instead of *cotton*. Pick to pieces one of your threads. What is it made of?"

C. "It is made of finer threads."

T. "Tell me all that you know about threads."

C. "The spider makes his web of a thread which contains 4000 finer threads. The fisherman makes his net of thread which contains three or six fine threads."

T. "Can you count the fine threads in one of your coarse threads?"

C. "No. There are too many, and they break and some are finer than hairs, as fine as the spider's thread."

T. "Those very fine threads are the raw cotton. I will pass some round that you may compare them. How does the spider make thread?"

C. "He makes it of a gummy substance which he sends out at the 4000 holes of his spinning pipe. He twists the 4000 fine threads into one coarser thread with the combs on his hind feet."

T. "Very good. How does the fisherman make his thread?"

C. "He rolls the raw cotton on his thigh to make fine threads, and twists them together with his hands to make coarser threads."

T. "Right. The *cotton-spinners twist* their thread from *raw cotton on a spinning wheel*. They sell this thread to the *weavers*, and they *weave* it into *cloth*, on a machine called a *loom*.

"Now look at the cloth of your saris and jackets and see whether the threads are arranged in the same way as in the coarse cloth."

C. "Yes. Some threads go along and some go across. The cross threads go over and under the other threads. All the threads are much finer than in the coarse cloth. Some of the threads are *coloured* and make a *pattern*."

T. "Yes, that is again like your *mats*. You use different coloured strips of paper and make different patterns with them.

"Some day soon we will visit the cotton-spinners and the weavers and ask them to let us see how they twist thread and weave cloth. Now tell me all that you know about cotton cloth."

SECOND LESSON ON FAMILIAR PLANTS.

THE COTTON PLANT.

Apparatus. Stem, leaves, flowers, and ripe pods of the cotton plant, for each child and the teacher.

Teacher. "The other day we examined cotton cloth. What is it made of?"

Children. "It is made of threads, which are made of raw cotton."

T. "Where does the raw cotton come from? You do not know? It comes from the cotton plant. Here are some leaves from that plant. Describe them."

C. "They are *green, broad and round near the stem.* At the top of the leaf there are *three points* like fingers."

T. "Yes, the whole leaf is something like a hand, with three fingers instead of five."

"Examine the *leaf-stalk* and *stem* and tell me about them."

C. "The *leaf stalk* is long and marked with many little *black spots.* At the place where the *leaf-stalk* joins the *stem* there are *two little narrow pointed leaves.* The *upper* part of the *stem* is *green* and marked by *black spots.* Lower down the *stem* is *brown.*"

T. "What colour are the flowers?"

C. "They are *yellow.*"

T. "Now look carefully at these *Pods.* Some are closed and some are open. What do you see in the open ones?"

C. "Oh, there is *cotton, raw cotton!*"

T. "Muni, open a closed pod. What do you find in it?"

Muni. "There is *cotton* in it also."

T. "Each search carefully amongst the cotton and see what you can find."

C. "There are *little black hard* things."

T. "What part of the plant do you think those black, hard things are?"

C. "They look very like *seeds*."

T. "They are the *seeds* of the *cotton plant*, and this *pod* is their *cradle*. What a cosy cradle it is for them, is it not, with all this soft, white cotton for them to lie on.

"What shall we do with these seeds?"

C. "May we *plant* them, and *water* them, and watch them *grow*?"

T. "Yes we will. What plants will grow out of them?"

C. "Cotton plants."

T. "Yes. Now tell me all you know about the cotton plant."

FOURTH LESSON ON COMMON OBJECTS.

PAPER.

Apparatus. A piece of paper for each pupil and for the teacher. If possible a piece of perforated zinc or wire gauze.

Teacher. "Manikam, distribute what I give you to all the others. What have you each got?"

Children. "We have each a piece of paper."

T. "Examine it carefully and tell me all that you can about it."

C. "It is white (or some other colour), smooth (or rough), and thin. We can bend it, fold it, and tear it."

T. "What is paper made of? You do not know? It is made of different materials. Much of the paper in India is made of old used paper, and of old gunny bags. Gunny is made from a plant which has coarse fibres. All the best

paper is made from cotton rags. The other day we examined some pieces of cotton cloth. What were they made of?"

C. "They were made of cotton which grew in the pods of the cotton plant and made soft beds for the little cotton seeds."

T. "Quite right. This raw cotton is made into cotton cloth and muslin, and we use it for saris, and coats, and turbans. When these are very old, some of them are made into paper. I will tell you how this is done. The old cotton rags are taken to a big building called a paper mill. The rags are generally dirty. First they are put into a big box, the bottom of which is made of wire net-work like this. There are sharp spikes on the sides of the box and in its centre. The spikes in the centre turn round continually. The rags are thrown, a few at a time, into this box. The turning spikes toss them about, and the dust and dirt fall out of them, and fall through the net-work bottom and out of the box.

"The rags are next cut up into small pieces and boiled with lime and soda until they are quite clean, and even coloured rags have become white.

"The clean rags are now put into another box, which contains many knives turning round and round. These knives cut the clean rags into the finest shreds. The shreds are then put into water and beaten into a pulp. The paper-maker spreads the pulp out in a very thin layer, squeezes it to get the water out, and lets it dry. When it is dry it is a sheet of paper. Lastly he dips it into a kind of gum, and leaves it to dry again. When it is dry the second time it is smooth paper."

NOTE.—If there is a paper mill in the neighbourhood the pupils should be taken to visit it after this lesson.

• *FIRST LESSON ON FAMILIAR MINERALS.*

LEAD.

Apparatus. Several small pieces of lead and several stones of about the same size as the lead, leaden chembus and cups, a bullet and some small shot, a fire, an iron spoon, a mould, such as a small metal box, a knife, and a hammer or big stone.

Teacher. "Name some things which we find *in the ground*, that are *not alive* and do *not grow*."

Children. "Rocks, stones, iron, clay."

T. "Right. To-day we are going to examine another substance of the *same kind*. I will give you a piece of it and also a stone. *Weigh* them in your hands and tell me which is the *heavier*. Pass them round the class so that all may weigh them."

C. "The *stone* is the *lighter*, the *other piece* is the *heavier*."

T. "Yes. The name of the *heavy substance* is *lead*. It is a very heavy thing. Look at it carefully, compare it with this gold ornament and describe it."

C. "Its *colour* is *grey*. It does not shine. Its surface is *dull*."

T. "When you weighed it did it feel *hard* or *soft*?"

C. "It felt *hard*."

T. "Krishnan, take this knife and *cut the lead*. Can he cut it?"

C. "Yes, he has *cut a piece off*."

T. "Now *cut the stone*, Krishnan."

Kirshnan. "I cannot cut it, it is too *hard*."

T. "You see that, though lead feels rather hard, it is *soft enough* to be *cut with a knife*. What difference do you see between the inside of the lead where it is cut and the outside?"

C. "The *outside* is *dull*, the *inside* is *bright*."

T. "Yes. The newly-cut, bright edge will soon grow *dull* also, now that it is *exposed* to the *air*."

"Sundram, come and beat this small piece of lead with this hammer. What has happened to the lead?"

C. "It is *flat*, but it is *broken*."

T. "Yes. *Lead* can be beaten out *flat* and *thin*. In a far-away country called China the people make *sheets* of *lead* as *thin* as *paper* and line boxes with them. We cannot make wire of lead, because it *breaks so easily*. Sundram, *bend* the lead that you have hammered. Can he *bend* it?"

C. "Yes. *He has bent it*."

T. "Tell me some things that can be *melted*."

C. "*Sugar, wax*."

T. "We will try to *melt* this *lead*. I will put a small piece in this iron spoon and place it over this fire. While I do so, you may tell me what we have found out about lead."

C. "Lead is *heavy, grey, dull* when exposed to the air, and *soft* enough to be *cut by a knife*. It can be *beaten thin*. The people in China make sheets of lead as thin as paper, and they line their boxes with these sheets. *Lead breaks easily*; wire cannot be made of it."

T. "Very good. Now look into this spoon. What has happened to the lead?"

C. "Oh, it has *melted*! It runs about the spoon like water."

T. "Lead *melts very easily*. I will pour the melted lead into this small tin box. I told you that lead was found in the ground. It is mixed up with silver and other substances in a sort of rock. In order to *separate* the *lead* from the *other substances* the rock is put into a very large hot fire. What will happen to the lead?"

C. "It will *melt*."

T. "Yes. It *melts*, and, being heavy, it *runs down*. Below the fire is a hollow, shaped like a *basin*. The *melted* lead *runs* into this *basin*. Of what *use* is *lead*?"

C. "*Water-pots* and *cups* are made of *lead*."

T. "Yes. Here are some. The *insides* of *copper vessels* are *painted* with a liquid made of *lead* and *sal ammoniac powder* mixed together. The rust on copper is poisonous. If it got into our food it would make us very ill. That is why copper vessels are painted *in* this way. *Bullets* and small *shot* for guns are also made of lead. Here are some. Now, we will examine our melted lead in the small tin box. What do you notice about it?"

C. "It is *cooler* and *hard* again."

T. "Yes. I will take it out of the box. What *shape* is it?"

C. "It is the *same shape* as the *box*."

T. "Right. If we want a *lead*en thing of a certain *shape*, we can get it by melting the lead, pouring it into a mould of the shape required, and allowing the lead to cool. When we take out the cooled lead, it is of the same shape as the mould in which it cooled. Now tell me all that you remember about lead."

THIRD LESSON ON FAMILIAR PLANTS.

THE PALMYRA.

Apparatus. A picture, model or black-board sketch of the tree; flowers and fruit (if possible), a leaf and stalk, with web, a piece of root and a foot-rule.

Teacher. "We have learned a great deal about trees and things made of wood. Can you think of a tree from which we get food, drink, wood, materials for writing and many other things?"

Children. "The *palmyra* tree."

T. "Yes. You all know that tree, and here is a picture of it. Describe it."

C. "Its *trunk* is *tall, straight and black*, with *marks* on it. It is *larger at the bottom* than at the *top*. It has no branches. The *leaves* are large, and grow in a *bunch* near the *top* of the trunk. The *flowers and fruit* grow quite at the *top*."

T. "Good. Those marks on the trunks show where dead leaves fell off. Here is a living leaf. Tell me what it is like."

C. "It is *green and very large*. It is *shaped* something like a spread-out *hand*, just as the leaf of the bambu is. It is also like a *fan*. It is divided into *long narrow portions*. The *largest portions* are in the *centre*."

T. "Very good. These portions of the leaf are called *rays*. Describe the *stalk*."

C. "It is *large and thick*. The edges have *sharp teeth*."

T. "Have you seen anything lately that had teeth like this stalk?"

C. "Yes. The *carpenter's saw* had such *teeth*."

T. "What is *wrapped round* the *lower part* of the *stalk*?"

C. "A *brown substance*."

T. "That is called a *web*. It is made, as you see, of *threads*. What do you know that is made of threads?"

C. "The *spider's web*, the *fisherman's net* and *cotton cloth*."

T. "Yes. This *web* is *not made*. It *grows*. Now we will look at the *flowers*. What do you notice?"

C. "There are *two kinds* of *flowers*. One has *few flower-leaves* and the other has *many*."

T. "Quite right. Some *palmyras* have *one kind* of flower and other *palmyras* have the *other kind* of flower. Describe the *flower-stalks*."

C. "They are *smaller and rounder* than the *leaf-stalks*."

T. "Yes. Look at them well, for they are *very important*."

We shall speak of them again. Now describe the fruit."

C. "It is *round* and *large*, like a baby's head. It is of a *golden colour*. There are *nuts* in the fruit."

T. "Yes, those nuts are the seeds. They are so *hard* that even an elephant cannot easily break them. Here is a piece of the root of the palmyra. I will try to break it. Describe it."

C. "It is *long*, *yellow* and *strong*."

T. "Yes, these roots are *very strong*, and can *pierce deep* down into the earth. They grow *down* and *down* until they find *water*. Often the *roots* below the ground are *as long* as the *stem* above the ground. Is the palmyra's stem tall or short?"

C. "It is *very tall*."

T. "You have learned lately in your geography lessons about feet and inches. What is this?"

C. "It is a *foot measure*; it is *one foot long*."

T. "Gopal, come here. I will measure you with this measure. How tall is Gopal?"

C. "He is *3 feet tall*."

T. "Yes. Palmyras are often *40* and *50 feet tall*. Suppose one is *42 feet high*. How many boys as tall as Gopal should we have to put one on the top of the other, before the highest will touch the top of the palmyra?"

C. "Gopal is *3 feet high* and the tree is *42 feet high*. How many *3 feet* in *42 feet*? There are *14*. We must have *14 boys each 3 feet high*."

T. "Quite right. Some palmyra trees are *twice* as high as *42 feet*. How high are they?"

C. "*Eighty-four feet*."

T. "Do you know how palmyras are planted? No. The gardener makes a *shallow hole* in the *ground*, puts into it one of these *hard nuts*, and *covers* it up. He makes a little

fence round it, to *protect* it from animals, that might *dig* it up. If weeds grow over the seed, he pulls them up, and sometimes he puts a little manure in the earth over the seed. What *grows* out of that *hard seed*?"

C. "A young *palmyra*."

T. "Quite right. But the gardener has to wait for a long time before his *palmyra* bears flowers and fruit. It will not do so until it is *15 years old*. Thayar, how old are you?"

Thayar. "I am *8 years old*."

T. "Some *palmyra* seeds were planted the year Thayar was born. How old are the trees that grew from them now?"

C. "*Eight years old*."

T. "How long will it be before they bear flowers and fruit?"

C. "Eight years from *15 years*. *Seven years more*. What a long time!"

T. "Yes, and some *palmyras* do not bear flowers and fruit until they are *20* or *30 years old*. Do you remember another plant like that?"

C. "The *bambu*. It is sometimes *40 years old* before it flowers."

T. "Now tell me what you have learned about the *palmyra* to-day."

"To the next lesson but one I want each of you to bring some things made from the *palmyra*. Each try to bring different things. If you tell father and mother that you are to have a lesson about them, they will lend you some nice things from home."

SECOND LESSON ON FAMILIAR MINERALS.

IRON AND COPPER.

Apparatus. A piece of iron and another (of the same size) of polished copper; articles made of each metal, a knife, and a hammer.

Teacher. "Of what are the chains of cradles and swings often made?"

Children. "They are made of *iron*."

T. "Yes, and of what is this water-pot made?"

C. "It is made of *copper*."

T. "Here are a piece of iron and another of copper. What *difference* do you see?"

C. "The *iron* is *black* and *dull*; the *copper* is *red* and *shining*."

T. "I will pass them round. *Feel* and *weigh* them. What do you notice?"

C. "They are *both hard*. The *copper* is *heavier* than the *iron*."

T. "Sundram, come and *cut* them with this knife."

S. "I *cannot cut* them; they are too *hard*."

T. "Scratch them with the knife."

S. "I have *scratched* the *copper*, but I *cannot scratch* the *iron*."

T. "Which then is the *harder*?"

C. "The *iron* is *harder* than the *copper*. The *iron* cannot be *scratched*."

T. "I will *hammer* this piece of *iron*. Does it spread out as the lead did when Krishnan hammered it?"

C. "No."

T. "That is because *iron* is very *hard*. If we put it into a very large hot *fire* it would become *soft* and *could be hammered out flat*, like lead. *Copper*, as you told me, is *softer* than *iron*. It can be *beaten* into very *thin sheets*."

Look at these two old iron and copper trays. What difference do you notice?"

C. "The *copper* tray is *bent*; the *iron* one is not."

T. "Yes. *Copper* bends easily, but cold *iron* will not bend. What did we do with the lead and a fire the other day?"

C. "We *melted* the lead."

T. "Yes. We could not melt iron and copper over our little fire, but when they are put into a very hot fire, they also *melt*. They are found *in the ground*, mixed up with other substances in a kind of rock, and they are *separated* from the *rock* by *melting* and collected in huge basins below the fires, just as lead is. I will strike an iron vessel and then the copper one. What do you hear?"

C. "The *iron* gives a *dull sound*. The *copper* gives a *loud pleasant sound*."

T. "Tell me some things that you see here that are made of iron."

C. "A cocoa-nut scraper, cooking vessels, a pestle and mortar for grinding betel-nut, shoes for oxen and horses, a spade, a reaping-hook."

T. "Good. Tell me some parts of our houses that are made of iron."

C. "Door handles, hinges, and nails."

T. "Some iron things are made by *melting* the iron and pouring it, when liquid, into a mould, as I poured the melted lead into a box. Other things are made by *softening* the iron in a hot *fire*, and *hammering* it into the right shape. Now name all the copper things that are here."

C. "Water-pots used for ceremonies, cooking vessels, and trays."

T. "Yes. *Copper* articles are generally made by *hammering*. Tell me all that you have learned about iron and copper."

NOTE.—After this lesson the children will enjoy, and will profit by, visits to the blacksmith and coppersmith.

FOURTH LESSON ON FAMILIAR PLANTS.

PRODUCTS OF THE PALMYRA.

Apparatus. A collection of articles made from the palmyra, as many as possible being brought by the children, with the co-operation of the parents. Also, young and old palmyra fruit, flowers with stalks, a little sap, sugar and sugar-candy, leaf with stalk and web, torch, matches, root, and a piece of palmyra wood from an old tree.

Teacher. "What a large number of things you have brought! Each come and give me your own, and I will place them all here, where we can see them nicely."

"What part of the *palmyra* is this?"

Children. "It is the *fruit*."

T. "Of what *use* is it?"

C. "It is of use to *eat*, and for the nuts in it, which are *planted*, and *grow* into *trees*."

T. "Here is a young fruit and here is an old one. Which is nicest to eat?"

C. "The *young fruit*. It is *pleasant* and *refreshing* on hot days."

T. "Yes. Only very *poor people* and *cattle* eat the *old fruit*. What part of the tree did I tell you was very *important*?"

C. "The *flower-stalks*."

T. "They are *important* because it is *from them* that the *juice* flows. All trees have *juice*, or, as it is sometimes called, *sap*, in them, but the *juice*, or *sap*, of the *palmyra* is full of *sugar*, and is *very nice*. The *toddy-man* *bruises* the *flower-stalk* with a *wooden instrument*, and *cuts* a *thin slice* off the *end* of the *stalk*. He does this for several days. About the *eighth day* the *juice* begins to *flow*. He then fastens

a little *earthenware vessel* on the stalk, so that it *catches* the juice. Every morning he climbs up the tree, cuts the stalk again, and carries away the juice from the little vessel. In the evening he climbs the tree, and cuts the stalk again, but does not take away any juice. Here is some of the juice. What is the *use* of it?"

C. "To *drink*."

T. "Yes; and that which is not drunk is *boiled*, and made into *sugar* and *sugar-candy*, like this. How do they taste?"

C. "They taste *nice* and *sweet*."

T. "Now look again at the *palmyra leaf*. Have any of you brought me anything made of these leaves?"

C. "Yes. Here are a *fan*, a *bucket*, a *water-pot*, *mats*, *basket*, *bags*, a *hat*, a *sandal*, a *book*, a *bill*, and a *letter*; all made of the leaves."

T. "Very good. You have taken trouble to bring many things. I have also seen the leaf used as an *umbrella*, and for *fuel*, and for *manure* to make the young trees grow. What parts of houses are made of these leaves?"

C. "The *roofs* of houses are *thatched* with them, and the *walls* of poor people's *huts* are made of them."

T. "Have you brought me any things made of the *leaf-stalk*?"

C. "Yes. This *rope* and *twine* are made of the stalk. Father told us so."

T. "Quite right. *Palings* for *fences* and parts of the *roofs* of *small houses* are also made of these stalks, and they are used for *fuel* and *manure*. Do you know what the *web* is used for? No? The *juice* of the *palmyra* is *strained* through it, and it is made into *torches* to light travellers at night. Here is one. It is made of *15 webs*. I will light it, that you may see how it burns. What do you notice?"

C. "It burns *red*. It does not flame. Ah! you shook it and the wind has caught it; now it flames."

T. "When it flames the web is burned up quickly. So the *torch-bearers* try to carry the torch *steadily* and keep it from the wind, that it may burn a long time. Generally *three torches* like this, burning one at a time, will light a traveller *all night*. Is the root of the palmyra useful? You do not know. If the nut is dug up after being three months in the ground, a young white root will be found growing out of it. This young root, roasted or boiled, is very good *to eat*. Sometimes we *grind* the boiled *roots* into a *powder* and eat it with fish, salt, chillies, mustard and saffron. The *old root*, mixed with chillies and boiled in water, is used as *medicine*.

"What part of the palmyra is this?"

C. "It is *wood* from the *stem*."

T. "Right. This *wood* is used for *house building*, for *spinning-wheels*, *wheels* of carts, for *boxes*, and many other things, but it is not hard enough for use until the *tree* is at least *one hundred years old*. This piece of wood must have come from a tree that grew for *15 or 20 years* and then bore flowers and *fruit*, and yielded *sap*. The *toddy-man*, and his son after him, *climbed* up and down and took away the sap for at least *80 or 85 years*, perhaps for much longer, and then the tree was cut down or blown down, and its *wood* was used to *build houses*, etc. Now tell me all that you can of the uses of the *palmyra fruit*, *flower-stalk*, *leaves*, *leaf-stalk*, *web*, *roots*, and *wood*.

"What a useful tree! No wonder that the people in South India say, 'The palmyra lives a thousand years, and lasts another thousand when it dies.' Now you shall each take again the pretty and useful things that you brought for this lesson. Carry them home and give them carefully to your fathers and mothers and tell them what you know about the palmyra tree. One day soon you shall learn a song about the useful palmyra tree."

THIRD LESSON ON FAMILIAR MINERALS.

GOLD AND SILVER.

Apparatus. A few articles of gold and some of silver, and a foot measure.

Teacher. "What are your ear-rings and finger-rings made of?"

Children. "They are made of *gold* (or *silver*)."

T. "What are your toe-rings and ankle-bangles made of?"

C. "They are made of *silver*."

T. "What are these two bangles made of?"

C. "One is *gold*, the other *silver*."

T. "What difference is there?"

C. "The *gold* is *yellow* and *very bright*. The *silver* is *white* and *bright*."

T. "Feel and weigh them."

C. "They both feel hard. The *silver* is *heavier* than the *gold bangle*."

T. "Yes. *Silver* is *heavier* than *gold*. Shall we try to cut or scratch those bangles?"

C. "No. It would *spoil* them."

T. "They are not made of quite pure gold or silver. If they were, we could cut them with a knife, as we cut the lead, and scratch them, and they would *bend* easily, and lose their shape. For this reason, a little copper is usually mixed with gold and silver before they are made into bangles, etc. *Pure silver* is very *soft*, but *pure gold* is *softer*. Since they are so soft, do you think they can be hammered out into sheets like copper?"

C. "Yes."

T. "They can be *hammered* into *sheets* much *thinner* than lead or copper sheets. Ruthnam, show me one inch on this foot measure. Right. Silver can be beaten into *sheets* so

thin that 10,000 of them lying one upon another would only make a pile one inch high. Gold can be beaten into even *thinner sheets*, so that 282,000 of them would only make a pile one inch high. Have you any gold or silver *wire* in your ornaments?"

C. "Yes, in our ear-rings."

T. "Silver can be drawn out into very *thin wire*, without breaking. A single grain of silver will make a wire 400 feet long, that is 400 times as long as this foot measure. A grain of gold can be drawn into a *very thin wire*, 500 feet long. Of what use are silver and gold?"

C. "Toe-rings, ankle-bangles, drinking cups, trays, belts, rupees, and other coins are *made of silver*. Finger-rings, wrist-bangles, necklaces, wedding tokens, ear-rings, ornaments for the hair, and mohurs are *made of gold*."

T. "Very good. Which is most valuable, silver or gold?"

C. "Gold is the most *valuable*."

T. "Where do you think that gold and silver come from?"

C. "Do they come *out of the ground* like lead, iron, and copper?"

T. "Yes, they do. Silver is sometimes found almost pure, and sometimes mixed with lead and copper. Gold is found in little round grains in the middle of hard rock. The rock is crushed and the bright shining grains of gold are picked out. Now tell me all that you know about silver and gold. Name all the things of which you have learned lately that are dug up from the ground."

C. "Lead, iron, copper, gold, and silver."

T. "These five substances are called metals. Repeat that word."

C. "*Metals*."

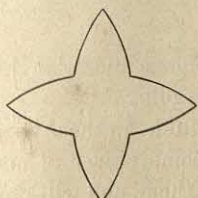
OCCUPATIONS.

THE remarks in the introduction to Kindergarten Occupations in Part I., and many of those in Part II., apply also to this Part; but, as the children are now older and more advanced, copying and imitation should be largely superseded by efforts at original work. Such work may often be very crude and poor, but its value lies, not in the work produced, but in the training which it gives to the children's faculties of thought, invention, and observation, and to the skill which it gives their hands.

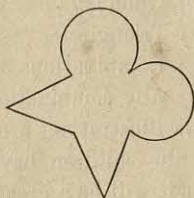
Seed-placing may now be discontinued as too easy for children in the Second Standard.

Stick-placing, which was discontinued towards the end of the previous year, may be taken up again in Standard II., for original designing only. The teacher should draw the children's attention to the fact that we like our clothes, household utensils, etc., to be pretty. She should lead them to examine the ornamental borders of their saris, jackets and caps, the engraving on earthenware and metal vessels and trays, and the embroidery on purdahs. With a little guidance they will notice that most of the patterns in these decorations are centre patterns or border patterns. The teacher should give the children some idea of symmetry. She should show them that, in a centre pattern, the top and bottom are usually alike, and the right and left sides correspond. For instance, in a star pattern the

children will quickly see that the figure (1) looks better than the figure (2).



(1).

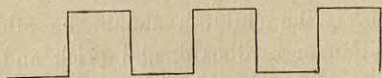


(2).

The teacher should also teach the children that border patterns are made by repeating a small pattern lengthwise. For instance, the pattern (3) repeated becomes (4). She



(3).

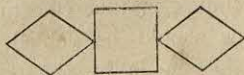


(4).

may finally show them that, by reversing a pattern, we can get a new pattern. Take the pattern (5), two squares with a diamond between them. If we reverse them, we have the new pattern two diamonds with a square between them, thus (6). With a few rules like these to help them and a



(5).



(6).

few directions, the children will learn to make simple original designs, such as:—

1. Centres and borders with:

- (a) Upright and horizontal lines.
- (b) Upright and slanting lines.
- (c) Horizontal and slanting lines.
- (d) Upright, horizontal and slanting lines.

2. Centres and borders with :

- (a) Squares.
- (b) Oblongs.
- (c) Triangles.
- (d) Combinations of squares, oblongs and triangles.
- (e) Any combinations of the foregoing.

A few illustrations are given, as a guide, in the Appendix. When the children have acquired some power of making designs it will be a great pleasure to them, and will develop their originality. Sticks are suitable as material for little designers, because the patterns made with them can be easily changed. When a fairly good design has been made the children should copy it on their slates. When a really good pattern has been designed with the sticks, the children should be allowed to draw it on cadjan or cardboard, and prick and sew it with coloured thread, choosing the colours themselves.

In Standard II. the children should be allowed to choose many of the colours which they use in their occupations. This adds much to the interest of their work and exercises their judgment and self-reliance.

Drawing. The copying of beautiful forms, such as leaves, flowers, feathers, shells and eggs, from the flat and from the real things, may be continued. Illustrations of the object lessons should be copied, very carefully, from enlarged drawings made by the teacher on the blackboard. The following are suggested :

A fish.

Scales of fishes.

The spider's web.

Leaves of different trees.

For original work, drawing has the great advantage over stick-placing that curved as well as straight lines can be introduced. The children should again examine decora-

tions, such as those on saris, household utensils, etc., and then draw some simple designs, first working out one or two with the teacher and then inventing original patterns, such as :—

3. Centres and borders with :

- (a) Curved lines.
- (b) Curved and straight lines.
- (c) Curved and slanting lines.
- (d) Any lines.

4. Centres and borders with :

- (a) Circles.
- (b) Ovals.
- (c) Leaves.
- (d) Flowers.
- (e) Any lines and forms.

Illustrations are given in the Appendix.

Some of the best of these designs may be copied on card-board, and pricked and sewn with coloured thread or silk. As a further training to the imagination and power of invention, the children should draw some illustrations of their stories and songs, such as the following :

The sāl tree :

- (a) As it was when it protected many living creatures.
- (b) As it was when it expected the wind.

The forest tree :

- (a) Before it was struck by the arrow.
- (b) After it was poisoned.
- (c) After it was revived.

The three fishes in the shallow lake.

The spider on his web and the dove on her nest, at the entrance to the cave.

The mother dove and the three little doves on the bough.

If possible, all drawing in Standard II. should be done on paper, not on slates.

Bead-threading and Mat-plaiting may be discontinued in this standard, as the children have probably learned, during the previous two years, all that these occupations can teach them.

Clay-modelling should be continued and improved. Forms modelled in previous years may be done again, and be brought to greater perfection. For instance, water-pots may be again modelled, and may be ornamented by engraving on them, with styles, or prickers, simple patterns designed by the children themselves. Trays may be treated in the same way. Illustrations of the object lessons and stories should be modelled, such as the fish, trunks of trees, the mouse, and the lakes in which the fishes lived.

Pricking and Sewing may be continued on the same lines as in Standard I.

Paper-folding should also be continued ; forms of beauty, such as stars, rosettes, etc., suitable for decorations, being made. A series is shown in the Appendix. Very neat, clean, and accurate work should be done by children in Standard II.

They should also be taught to make up their handiwork into useful articles, and should be allowed to present some of these as gifts. This trains them to be practical, and encourages them to be generous. The best drawings may be framed by the children, in frames cut out of cardboard, and ornamented with paper-folded stars. The latter may be gummed on to the cardboard frames. The pictures may be slightly stitched to the cardboard, and a piece of paper may be gummed at the back of the picture, helping to fasten the picture to the cardboard, and making the back neat. A piece of coloured thread, or string, may be neatly fastened at the top of the frame, to hang it on a nail. These framed pictures may ornament the school walls for a

time, or be taken home, as gifts to father, mother, and other relations, especially on birthdays, or other gala days.

Well executed clay models may serve as paper-weights for teachers' or fathers' writing-tables. Clay cups and vases will be welcome to mothers, to hold many household odds and ends. Cardboard, ornamented with pricking and sewing, may be made up into portfolios, letter cases, blotting books, and boxes. The edges may be joined by gum and strong paper, or cotton cloth, or they may be so cut that they overlap, and can be sewn together with strong thread.

SONGS AND GAMES.

INTRODUCTION.

THE teacher should continue to bear in mind the remarks on Songs in Parts I. and II., especially those referring to songs and dramatic action as means of expression. The children of Standard II. have reached the age when the imagination is awake; when everything presents itself to their minds as a picture or drama, and they naturally try to act out the dramas as games. The following songs have therefore been arranged, as far as possible, as simple plays or games, in which the different characters are taken by the children. In representing a character, the child throws itself into the part so completely that, for the time being, it imagines that it is the person or thing which it personates. By this means it is profoundly influenced, and learns much.

In the instructions that follow, it is recommended that the children be allowed to choose their parts. This adds greatly to the zest of the game and ensures a variety of experiences, as a child is sometimes a bangle-seller and sometimes the maiden who buys the bangle; sometimes a mother-dove, at other times a baby-dove. One day he may be the centre of attention as the palmyra, and next day he may be only one of many in the chorus. The teacher must exercise constant care that all children in turn have the

right of choice. She should also encourage them to choose different parts, in order that they may get a variety of experiences.

As the children are now older and becoming imaginative, the teacher should, to some extent, cease to imagine for them, and should lead them to do so for themselves. Instead of inventing connections between the stories and songs, she may lead the children to do so, and may accept their suggestions. For instance, she may ask whether the children think the bangle-sellers in the first song are those from Lahore or different ones. If they are from Lahore, what were they doing in that village so early? What was the herd-boy doing? What made the traveller in such a hurry, and where was he going? Would the school-boy be in time at school? Who was the beautiful maiden? With a little help the children will probably guess that the bangle-sellers were their old friends, because they were a man and wife and they sold glass bangles. Perhaps they will invent that the Governor's wife had left Lahore for a time, and therefore had bought no bangles lately, so the poor couple had tramped to a village to try to sell their wares there. They may say that one of the herd-boys was little Anklebone, and he was minding his aunt's sheep and playing on his pipe. They may suggest that the traveller was hurrying to a sick friend, who lived in the village beyond. They will probably guess that the boy was late for school, since he loitered so slowly along. There may be many guesses about the beautiful maiden. They may decide that she was the daughter of the priest in the temple by the tank, or a princess. At any rate they will be very glad that she bought the bangle for her beautiful wrist, and that the bangle-seller and his wife did not go home penniless. In some such manner as this the children's imaginations and minds should be exercised and trained,

and they may gradually gain the power of composing little original stories.

The children will readily see the connection between the lessons on the palmyra and the song about it. The one will amplify and explain the others, while personating the tree will impress on the children its useful character.

The same is true of the song of the trees. In the lesson they become acquainted with the trees under their utilitarian and prose aspect. In the song they see the same trees from a poetical point of view. The game of the dove's family will readily associate itself with the stories about doves, and the children will enter more heartily into the meaning of those stories after acting as doves themselves.

The Song of the Blessing of Rain is the one promised to them at the end of the lesson on rain. It is from the famed Tamil poem, The Kural, which is very popular in Southern India. The Cradle Song embodies, very beautifully, the thought that has constantly been presented to the children under various aspects, that is, their fellowship with all living beings and the dependence and interdependence of all in this world.

The seventh game, known in Tamil as Kei-kummi (hand-clasp), is valuable for the physical exercise and training in precision of movement which it gives. Many varieties of the same game are played throughout Southern India.

The Indian Ball Game and Song are more suitable for the playground than for the schoolroom.

THE SONG OF THE BANGLES.

1. "Glass bangles, ho ! glass bangles, ho !
2. Fair maids and matrons come and buy !"
3. Along the road in morning's glow
4. The pedlar raised his wonted cry.

- 5. The road ran straight, a red, red line,
- 6. To Khirosgram, for cream renowned,
- 7. Through pasture meadows, where the kine,
- 8. In knee-deep grass, stood magic bound
- 9. And half awake, involved in mist
- 10. That floated in dun coils profound,
- 11. Till, by the sudden sunbeams kist,
- 12. Rich rainbow lines broke all around.

- ²13. "Glass bangles, ho ! glass bangles, ho !"
- 14. The roadside trees still dripped with dew,
- 15. And hung their blossoms like a show.
- 16. Who heard the cry ? 'Twas but a few :
- ³17. A ragged herdboyl ; here and there,
- 18. With his long stick and naked feet ;
- ⁴19. A ploughman, wending to his care,
- 20. The field from which he hopes the wheat ;
- ⁵21. An early traveller, hurrying fast
- 22. To the next town ;⁶ an urchin slow
- 23. Bound for the school ; these heard and past
- 24. Unheeding all⁷—"Glass bangles, ho !"

- 25. Pellucid spread a lake-like tank⁸
- 26. Beside the road,⁹ now lonelier still,
- ¹⁰27. High on three sides arose the bank
- 28. Which fruit-trees shadowed at their will ;
- 29. Upon the fourth side was the Ghat,¹¹
- 30. With its broad stairs of marble white,
- 31. And at the entrance arch there sat,
- 32. Full face against the morning light,
- 33. A¹² fair young woman with large eyes,
- 34. And dark hair falling to her zone,
- 35. She¹² heard the pedlar's cry arise,
- 36. And eager seemed his ware to own.

37. "Glass bangles, ho!"¹³ See, maiden. see¹⁴
 38. The rich bright colours, sunbeam kist!
 39. Happy, oh, happy, shalt thou be,
 40. Let them but clasp that slender wrist.
 41. Just try them on!"¹⁵ She stretched her hand.
 1642. "Oh, what a nice and lovely fit!
 43. No fairer hand in all the land,
 44. And lo! the bracelet matches it.
 45. Glass bangles, ho! glass bangles, ho!
 46. Fair maids and matrons come and buy!"

ACTIONS.

The parts to be taken in this little drama are the bangle-seller and his wife, carrying glass bangles.

The herdboy, carrying a stick.

The ploughman.

The traveller, carrying a bundle.

The schoolboy, carrying his books and slate.

The maiden.

The children should be allowed to choose their parts, but should, change them every time the game is played, both for variety and to let all take important parts in turn.

A chalk line may be drawn on the floor for the ghat-steps round the lake, and the maiden should sit there.

Those for whom there are no parts should form a ring round the maiden. The bangle-sellers should walk about within the ring. The other actors should stand outside the ring, but should come into it, pass across, and leave it at the opposite point, when they are mentioned.

¹ The bangle-sellers sing lines 1 and 2, which are repeated by the children in the ring, who then sing lines 3 to 12, and all the lines not sung by the bangle-sellers.

² Line 13 is sung like line 1.

³ As lines 17 and 18 are sung, the herdboy crosses the ring, and the children point to him.

⁴ As lines 19 and 20 are sung, the ploughman crosses the ring, pointed to by the children.

⁵ As line 21 is sung, the traveller hurries across the ring, and the children point to him.

⁶ At line 22 the schoolboy loiters slowly through the ring, pointed to by the children.

⁷ The bangle-sellers sing their cry, and the children in the ring repeat it.

The children sing from lines 25 to 36 with appropriate actions. They point to—

^{8,9} The tank, and to a road beside it.

¹⁰ Upwards, as at high banks.

¹¹ To the ghat-steps.

¹² To the maiden.

¹³ The bangle-sellers sing lines 37 to 46, and all join in repeating lines 45 and 46.

¹⁴ The bangle-sellers show their wares to the maiden.

¹⁵ The maiden stretches out her hand.

¹⁶ The bangle-seller puts a bangle on her wrist.

THE SONG OF THE PALMYRA.

“O Palmyra, Palmyra, why dost thou grow so tall?”

“Do not the people of this country know why I grow?”

If not I will tell them. Prosperity to the girls!

If not understood, I will explain. Prosperity to the world!

Be not inattentive but hear me joyfully.

¹ I become shade to rest in.

² I become a grove for walking in.

I flourish always on the bunds of tanks.

³ I become a good palmyra fruit for the hungry.

⁴ I become toddy-water for the weary.

I become palmyra juice for young and old.

I become a tender nut in the summer season.

⁵ I become good sugar for young mothers.

I become the saw-like stem of a leaf.

⁶ I become an umbrella, to protect folks from rain.

⁷ I become beams and rafters for the house.

⁸ I become a strong pikotta, to water the withered crop.

- ⁸ I become the axis of your wheel and a spinning wheel
for threads.
- ⁹ I become a shuttle for the weaver and a basket for
keeping fish.
- I become a dress-box for old people.
- I become a box to keep the fragrant leaves for the
religious.
- I become a beautiful beam for the yard.
- ¹⁰ I become a bucket to draw water and a rope for the
bucket.
- ¹¹ I become a necklace for little children.
- ¹² I become a toe-ring.
- ¹³ I become a ring for your little finger.
- ¹⁴ I become a mat used at prayer time.
- I become a mat for sleeping and a shelter for those who
weave mats.
- ¹⁵ I become a beautiful mat, on which the young reader
sits.
- I become good paper for the village clerk.
- I become a leaf for a book.
- I become a joy for all.
- I become a good fan for girls and those who are tired.
- ¹⁶ I become a good rope for tying and a rope to bind the
calf.
- ¹⁶ I become a rope for binding the hind legs of cows when
they are milked.
- ¹⁷ I become a rope mattress for the cradle and a swing for
the child to play on.
- ¹⁰ I become a rope for drawing water from the well.
- ¹⁶ I become a rope for tying fences and firewood.
- ¹⁸ I become a filter and a broom for your house.
- I become a net and a cradle for you.
- ¹⁹ I become a cover for the style, held by the boy when he
writes.

I become a stand, to place under heavy water-pots.

²⁰ I become an ear-ring for the poor to wear.

I become a saffron box for the matron.

I become a betel-nut box for the rich lady.

I become a betel-leaf box for the old lady.

I become a powder-box for the good girl.

²⁰ I become a beautiful ear-ring for the girl.

I become fuel for fires and a rafter for house building.

Once in every year the goddess of Wisdom is worshipped.

The house is cleaned and the floor is decorated with drawings.

A seat is cleaned and adorned. Books are placed on it.

All the world worships, placing flowers and rice on those books.

The second day, Vijayadasami, is the day to teach a child for the first time.

The child is bathed in oil and dressed beautifully.

The child is garlanded and the books are given into his hand.

Songs of blessing are sung.

A leaf of mine is made ready.

And, with the beautiful ornamented style,

The brahmins and old people write on it and worship it.

The first reading-book is made of me.

The first arithmetic book is made of me.

• The Vēdas and Sāstras are made of me.

The Rāmāyana and Mahābhārata are made of me.

The Bhāgavatham and all religious books are made of me.

I am famous everywhere, from the Ganges to Ceylon.

Rajahs and Ranees reveal their thoughts through me.

Traders and merchants understand their business through me.

Writers and masters keep their accounts through me.

They keep me safely in big shops and bazaars.

They keep me safely in cloth bazaars and other shops.
 I lead the way and help people in money matters.
 In the month of Karthigai I become fireworks for the
 children and I run in all the streets.
 I become a pandal for the wedding house.
 I go in splendour to the courtyard, when ceremonies are
 performed.
 I go with joy when a child is born.
 I go in splendour when a king is born.
 I am in palaces and in durbars.
 I am in big houses and in small ones.
 I am in sheds and in hamlets.
 I become a thatch for mud walls.
 I become a message of joy for those who are far away.
 I become a message of death from afar.
 I am always ready for all purposes.
 God created me, to be useful in many ways.
 Those who hear of me and those who write about me,
 Those who sing of me and those who read about me,
 Those who print on me and those who rule over Madras,
 May they flourish like the banyan tree and prosper for
 ever!"

ACTIONS.

Let the children form a ring with a tall child, who is also a good singer, in the centre, to personate the palmyra.

The children forming the ring sing the first line. The one who personates the palmyra sings lines 2 to 5. The remaining lines may be sung by all the children, with appropriate gestures. They:

¹ fold hands and rest the left cheek on them as if sleeping.

² walk a few steps forward.

³ make the action of eating.

⁴ make the action of drinking.

⁵ make the action of holding up an umbrella.

⁶ point to the ceiling.

⁷ step as the man does on a pikotta.

- ⁸ whirl the right hands round as if turning a wheel.
⁹ make the action of throwing the shuttle.
¹⁰ make the action of pulling up a rope and bucket from a well.
¹¹ point to their necklaces.
¹² point to their toe-rings.
¹³ touch their finger-rings.
¹⁴ point to the ground.
¹⁵ sit down.
¹⁶ make the action of tying.
¹⁷ make the action of swinging a cradle.
¹⁸ make the action of sweeping.
¹⁹ make the action of writing.
²⁰ touch their ear-rings.

THE SONG OF THE TREES.

What glorious trees ! The sombre saul
On which the eye delights to rest,
The betel-nut, a pillar tall,
With feathery branches for a crest,
The light-leaved tamarind, spreading wide,
The pale, faint-scented, bitter neem,
The seemul, gorgeous as a bride,
With flowers that have the ruby's gleam.

The Indian fig's pavilion tent,
In which whole armies might repose,
With here and there a little rent,
The sunset's beauty to disclose.
The bambu's boughs that sway and swing
'Neath bulbuls as the south wind blows,
The mango-tope, a close dark ring,
Home of the rooks and clamorous crows,

The champac, bok, and South-sea pine,
The nagessur, with pendant flowers

Like ear-rings, and the forest vine
 That, clinging over all, embowers
 The sirish, famed in Sanscrit song,
 Which rural maidens love to wear,
 The pipul, giant-like and strong,
 The bramble with its matted hair.

All these and thousands, thousands more,
 With helmet red, or golden crown,
 Or green tiara, stately grow,
 On hills and plains of Hindustan.

ACTIONS.

If the class is large enough each child may be allowed to personate one of the sixteen trees named, each choosing her own part. As before mentioned, every child should, in turn, be allowed a choice, and the favourite parts should not be monopolised by any. If there are more than sixteen children, the remainder can join in the singing. A ring should be formed, the children who personate trees standing in it together, in the order in which they are mentioned in the song. When the sāl tree is mentioned, the child who personates it should step into the centre of the ring. At the mention of the betel tree, the child representing it should step to the side of the child personating the sāl tree, and so on, until the children representing the sixteen trees are standing side by side within the ring. When any characteristic is mentioned, the child should represent it. For instance :

The betel tree should wave her hands above her head as a feathery crest.

The tamarind should spread her arms out wide.

The Indian fig may spread out her arms and rest them on smaller children's heads to represent the trunk-like roots.

The bambu should sway and swing her arms.

Three children may make a little ring to represent the mango-tope.

The nagessur may hang flowers from her ears.

The forest-vine should cling to the sirish.

The last four lines should be sung by the remainder of the children, while they point to the sixteen trees.

THE DOVE'S FAMILY.

"Cooing, cooing, cooing dove !
 How many young ones have you ?"
 "Five little ones I have hatched."
 "Where are the little ones now ?"
 "On a strong bough I left them."
 "I cannot see them on the bough ;
 Has a crow carried them off ?"

ACTIONS.

The children should stand in a ring, with one child in the centre to represent the mother-dove. Five of the smallest children should be perched on a bench near, as young doves.

Lines 1, 2 and 4 are sung by the children who form the ring. The remaining lines are sung by the child representing the dove.

While the 3rd line is being sung, the five children should hop quietly off the bench and hide behind it. At the last line the mother-dove should fly off to the bench, to see what has become of her little ones. When she finds them she should coo, caress them, and show her joy.

THE BLESSING OF RAIN.

The genial rain ambrosia call :

¹ The world but lasts while rain shall fall.

¹ 'Tis rain begets the food we eat :

¹ The precious rain is drink and meat

Let clouds their visits stay and dearth

Distresses all the sea-girt earth.

¹ Unless the fruitful showers descend,

The ploughman's sacred toil must end.

Destruction it may sometimes pour,
 But only rain can life restore.

No grassy blade its head will rear,
 If from the cloud no drop appear.

The ocean's wealth will waste away,
 Except the cloud its stores repay.

The earth, beneath a barren sky,
 Would offerings for the gods deny.

Were heaven forgetful, men below
 Nor rites could pay, nor alms bestow.

Since, without water, without rain,
 Life's duties were essay'd in vain.

This song does not lend itself to actions, except that at the lines marked ⁽¹⁾ the children may raise their hands above their heads and bring them slowly down, fluttering their fingers to represent the drops of rain falling.

CRADLE SONG.

He who poured the harvest, and made the winds to blow,
 Sitting at the doorways of a day of long ago,
 Gave to each his portion, food and toil and fate,
 From the King upon the *guddee* to the Beggar at the gate.
 All things made He ! He, the great Preserver.
 Mahadeo ! Mahadeo ! He made all.
 Thorn for the camel, fodder for the kine,
 And mother's heart for sleepy head, O little son of mine !
 Wheat He gave to rich folk, millet to the poor,
 Broken scraps for holy men, that beg from door to door.
 Cattle to the tiger, carrion to the kite,
 And rags and bones to wicked wolves without the wall
 at night.

All things made He ! He, the great Preserver.
Mahadeo ! Mahadeo ! He made all.
Thorn for the camel, fodder for the kine,
And mother's heart for sleepy head, O little son of mine !

This song should be sung quietly and reverently, without actions.

SONG OF HAND CLAPPING.

- "Oh children ! Oh children ! Where are you, oh children ?"
"In the brinjal garden, they are digging, the children."
"There also I sought them. Where are they, the children ?"
"In the Brahmin street, they play ball, the children."
"There also I sought them. Where are they, the children ?"
"In the Goldsmiths' street, they are romping, the children."
"There also I sought them. Where are they, the children ?"
"In the Rice Merchants' street, they make garlands, the children."
"There also I sought them. Where are they, the children ?"
"In the Peasants' street, they are playing, the children."
"There also I sought them. Where are they, the children ?"
"In the Traders' street, they play merrily, the children."
"There also I sought them. Where are they, the children ?"
"In the Oilmongers' street, they are chattering, the children."
"There also I sought them. Where are they, the children ?"

ACTIONS.

The children stand in a ring and clasp each others' hands. As they sing they keep time by clapping their own hands and their neighbours' alternately, and stamping their feet, and moving onwards a step at a time, so that the ring turns round and round. At intervals they also bend downwards from the waist. The song is sung and the game played quickly, and the latter gives excellent physical exercise.

AN INDIAN BALL GAME AND SONG.

In this game three balls are thrown into the air, one being caught in the hand descending whilst others are rising, all the balls being thus kept in motion at once and continuously.

FIRST PART.

GAME I.

Each child must have three differently coloured balls. She holds one ball in the left hand and two in the right, and plays as follows:—

1. Throw up one ball from the right hand, slantingly towards the left.

2. Throw up the ball in the left hand, slantingly towards the right, and catch the ball in 1.

3. Throw the remaining ball from the right hand, slantingly towards the left, and catch the ball in 2.

4. Repeat 1, 2 and 3 ten times, singing the following or any suitable words, or merely counting in time to the ball-playing.

SECOND PART.

GAME I.—KNOCKING.

Play as in Game I., but when throwing up a ball with one hand, knock the ground with the ball in the other hand.

Repeat ten times.

GAME II.—RIGHT HAND KNOCKING.

Play as in Game I., but knock the ground with the balls in the right hand only.

GAME III.—LEFT HAND KNOCKING.

Play as in Game I., but knock the ground with the balls in the left hand only.

GAME IV.—ALTERNATE KNOCKING.

Play as in Game I., but knock the ground with every alternate ball.

GAME V.—ALTERNATE HAND KNOCKING.

Play as in Game I., but knock the ground alternately with the ball in the right hand and alternately with the ball in the left hand.

THIRD PART.

GAMES I. TO V.—FLOWER PLUCKING.

• Play as in the Second Part, Game I., with the following exceptions :

Catch the balls over-hand, palm-downwards. Instead of knocking the ground with the balls, catch them gently with the fingers, the hand being palm-downwards.

FOURTH PART.

GAMES I. TO V.—CUP AND BALL.

Play as in the First Part, Game I., with the following exceptions :

Hold the hand out flat, palm-downwards, and curve the fingers backwards, so as to form a hollow, or cup, in which the ball rests. Throw up the ball from and receive it into this cup.

AMMĀNEI.

1.

O ball ! O ball ! Come dancing, O ball !
 O resting necklace ! Come dancing, O ball !
 O shell necklace ! O wise god ! O ball !
 God of good luck's necklace ! O good luck ! O ball !
 Come, water of milk river. O Pandus ! Come running.
 Come, water of salt river. O good folks ! Come running,
 To her who allows the ball to fall the game is lost.

2.

To the second knock.
 What to do and what to hear.
 A young baby in the hand ;
 A ring worn on the hand !
 To the mother of the twins,
 The second also is finished, O ball !

3.

To the third knock.
 What to do and what to hear.
 That which is bambu is bambu ;
 The bambu that comes forward ;
 The bambu that comes leaning ;
 The bambu that is fighting ;
 The bambu that goes round the boundary and comes in
 front ;
 The bambu that goes round the garden and comes across.
 What, what bambu ?
 The young bambu, and the red bambu.
 The bambu woven into mats, in the Pandaram street.

We conquered the town where horses are stabled.
We bought the town that is in order.
The floor was plastered with plaster;
Drawings were drawn on it with sandal;
The wick was made of pearls;
The silky lamp was lit
To the god of three eyes.
The third also is finished.

4.

To the fourth knock.
What to do and what to hear.
O the jembu tree and the pīpul tree!
O the jembu tree and the pīpul tree!
Come, O sister-in-law!
O the tulip, the tulip!
Do you come to deck with flowers?
Do you come for marriage with ripe fruits and raw fruits?
Do you come as a bride, for the wedding hall?
If you come as a maid the musk will be fragrant.
If you come as a bridegroom the ointments will be fragrant.
If it is fragrant will it not be kept in the bazaar?
If it is in the bazaar will not a girl buy it?
Will not the girl become beautiful?
Will not the pandit become divine?
All these are finished, O dropped ball!

5.

To the fifth knock.
What to do and what to hear.
A foot bangle for the Pandus and another bangle to suit it;
The lined cloth and graceful folds.

Come, you beautiful girl, with the beautiful figure and beautiful face.

We carry food for the beautiful girl ;

Placed on a throne and driven in a beautiful car.

The lamp is lit in Appa's court-yard ;

The lamp is lit in the girl's court-yard ;

In the court-yard of uncle who reigns and has elephants ;

In the court-yard of young uncle who reigns and has horses ;

In grand-father's court-yard, where scorpions raise their stings ;

In our court-yard where crabs raise their claws ;

In our court-yard where gingelly seeds are ground ;

In grand-father's court-yard where gram seeds are ground ;

In our court-yard where everything plays.

All these are finished, O you dropped ball !

6.

To the sixth knock.

What to do and what to hear.

Overflowed, overflowed, the big river overflowed.

I saw the Brahmin in the big river ;

In the Brahmin's hand I saw the parrot's cage ;

Around the parrot's cage I saw the lamps lighted,

Lighted, lighted ; the silver lamp was lighted.

The silver lamp lighted and the maid-servant working ;

The golden lamp lighted and the maid-servant working ;

All lamps will burn in our court-yard.

All these are finished, O dropped ball !

7

To the seventh knock.

What to do and what to hear.

Did you see the strange thing on the bank of the river ?

If it be cucumber we can swallow it ;
If it be raw rice we can pour milk on it and eat it ;
If it be half-boiled rice we can fry it and eat it ;
If it be mango we can put it in our pocket ;
If it be cocoanut we can eat it ;
If it be young cocoanut we can take it and drink it ;
If it be sugar we can break it and eat it ;
If it be sugar-candy we can bite it and eat it.
All these are finished, O dropped ball !

The young cluster, the fruit ;
The month Panguni, the country Kangini ;
The quail on the bough ;
The root of the lime creeper ;
Is this how the cluster ripens, O girls ?
Is this how you wander about the towns, O girls ?
Is this how you get on cars, O girls ?
Is this how the girls play, O girls ?

The only cluster, the best cluster.
The second cluster, the precious cluster.
The third cluster, the cluster of pearls.
The fourth cluster, the good cluster.
The fifth cluster, the young raw hidden fruit.
The sixth cluster, the heaped up cluster.
The seventh cluster, filled with oil.
The eighth cluster was hit.
The ninth cluster ran away.
The tenth cluster was finished.

The dashing cluster flew away ;
The leaning cluster leaned heavily ;
The active cluster was exhausted.
All the clusters were finished.

KNOCKS.

He who cannot hit once must bear two knocks.

He who cannot hit twice must bear three knocks.

He who cannot hit thrice must bear four knocks.

He who cannot hit four times must bear five knocks.

He who cannot hit five times must bear six knocks.

He who cannot hit six times must bear seven knocks.

He who cannot hit seven times must bear eight knocks.

He who cannot hit eight times must bear nine knocks.

The ninth knock ran away ;

The tenth knock being over

The dashing knock ran away ;

The slanting knock went slanting ;

The active knock being exhausted

All the knocks are taken up.

CONNECTION WITH OTHER LESSONS.

READING AND WRITING.

THE suggestions in Part I. regarding reading and writing apply with equal force to Standard II., although, of course, the children in this standard can deal with more difficult sentences. Lessons in the Reading Book which are connected with the stories, etc., should, as far as possible, be read. At least one Indian Reading Book for Standard II. contains lessons on The Bangle-Seller, The Goldsmith, and Fish.

If the copies in copy-books are written by the teacher, words and sentences connected with the stories, etc., should sometimes be set as :

Lahore, Elephant, Sabuktagin.

The elephant is obedient.

The spider spins a web.

The palmyra tree is useful.

One of the songs may sometimes be given as dictation, for instance, parts of the Song of the Palmyra and the whole of the Hand Clapping Song.

In Standard II. the black-board should be used a little for writing in object lessons, some new words and short statements being written by the teacher on it. It should, however, be used sparingly, and only for easy words and statements, which should invariably be read by the children. The object lesson should never become a lesson on reading and writing. Great care should be taken to continue and

improve the good habits in reading and writing begun in the lower standards.

POETRY.

Children in the Second Standard are expected to repeat about 30 lines of verse. They can bring up for these any of the songs in this Part, except the Ball Song.

ARITHMETIC.

The suggestions regarding arithmetic in Part I. apply in large measure to Standard II. also, and need not be repeated here.

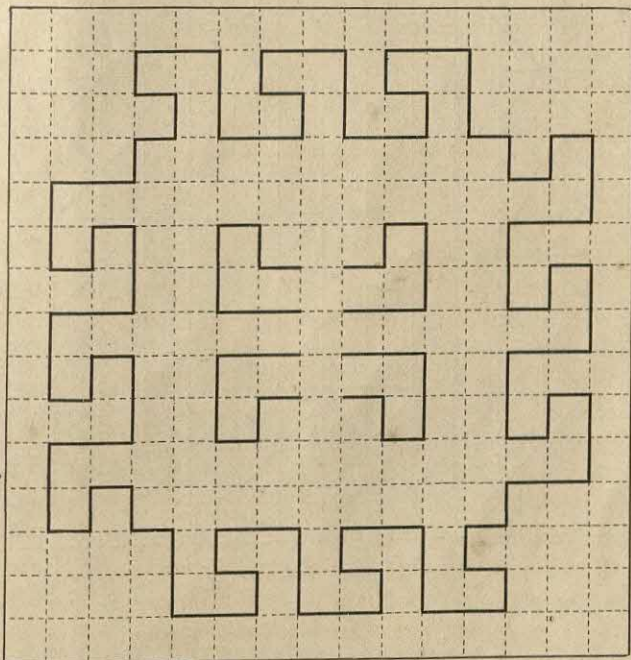
GEOGRAPHY.

Part of the geography usually required in the Second Standard is a knowledge of geographical terms, as far as they can be illustrated by the physical features of the locality in which the school is situated. This generally means knowledge of a river, hill, island, etc. In addition to visits to these physical features, a knowledge of them is best taught by clay-modelling. Suppose that the lesson is on a hill. A large tray, or board, containing a quantity of clay, and a jug of water, should be provided. The teacher should first model the hill herself, and then allow each child to model one. In the lesson on a river, its source on the hill, the slope of the land and the bed of the river should be modelled in clay, and water should be poured in gently at the source to form the river. The sea may be represented by a basin of water, just below the edge of the tray. Reference may be made to the rock in the story of the Greedy Monkey and the lesson on rocks; also to the story of the River and the Canes.

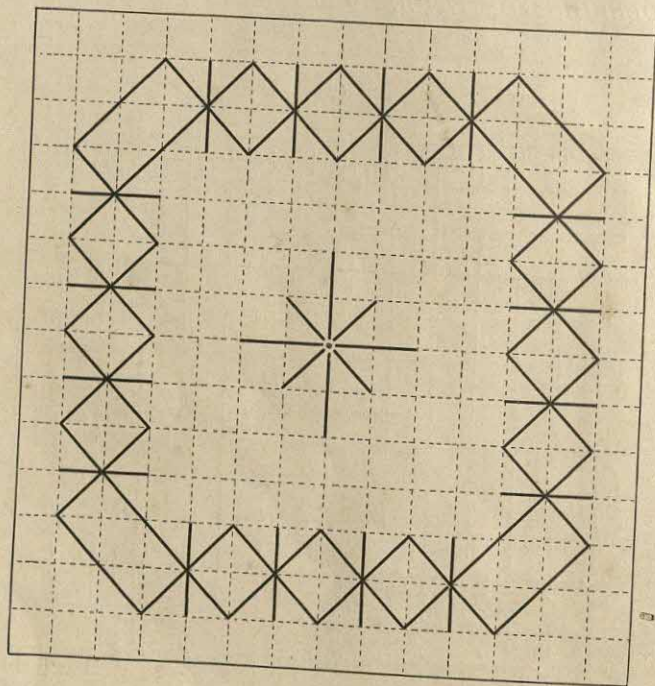
APPENDIX I.

DESIGNS FOR STICK PLACING AND DRAWING.

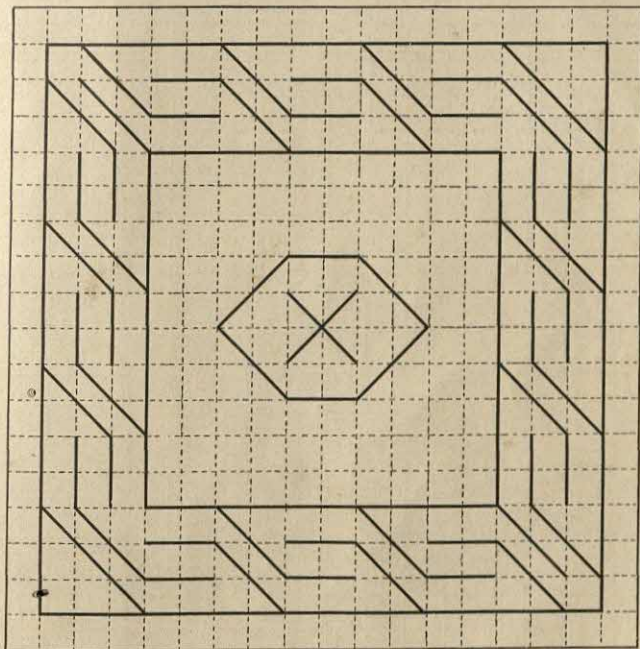
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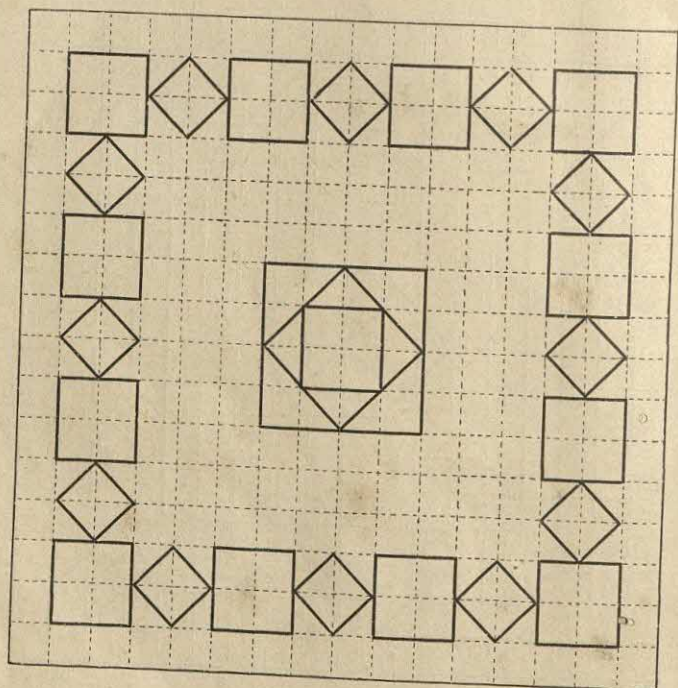
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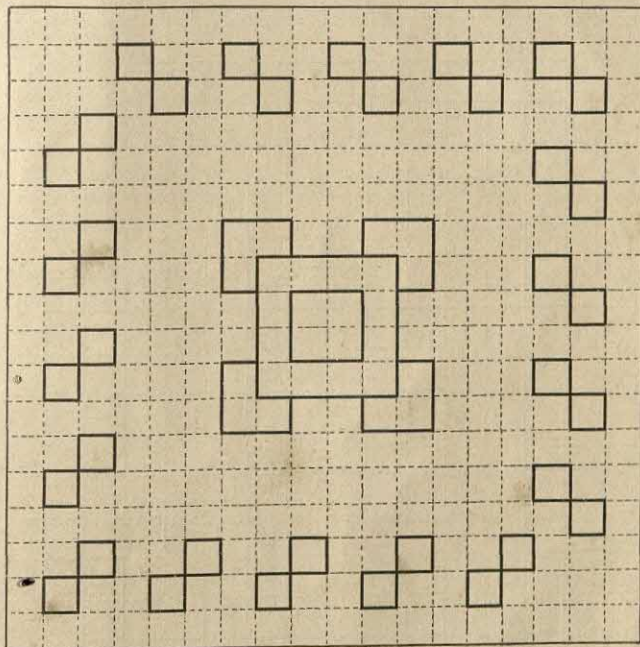
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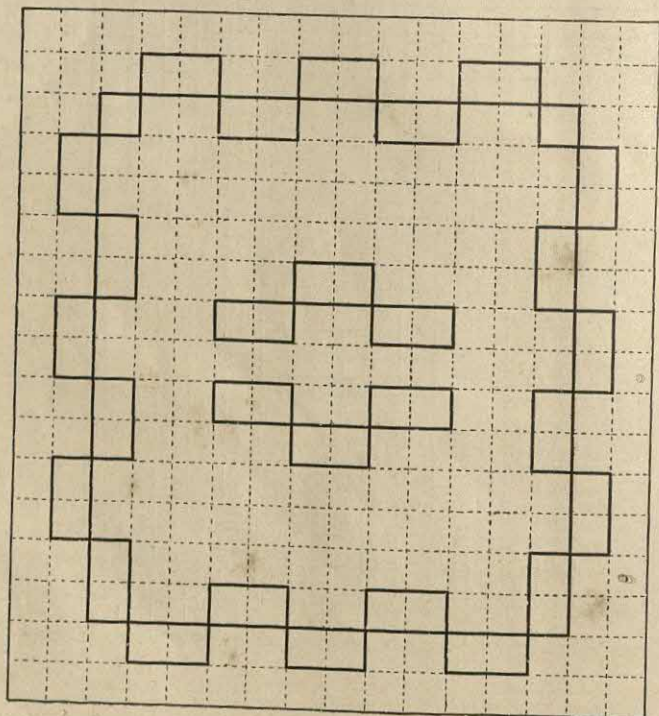
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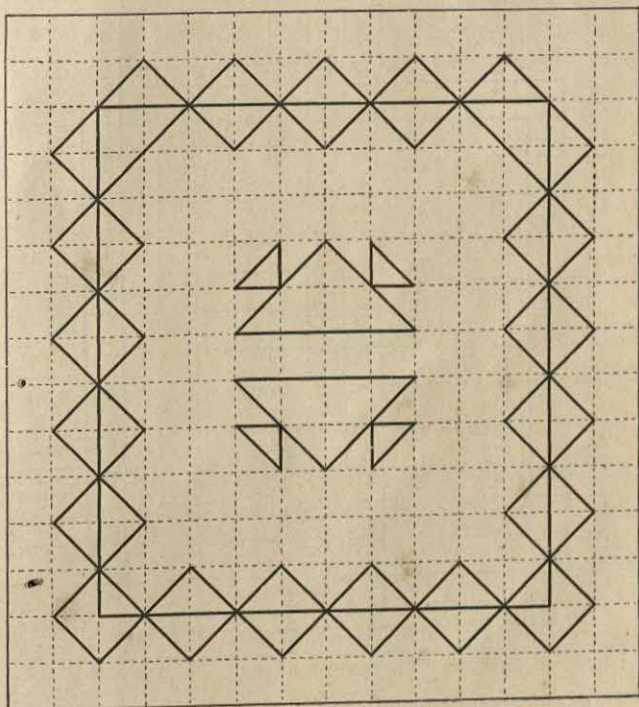
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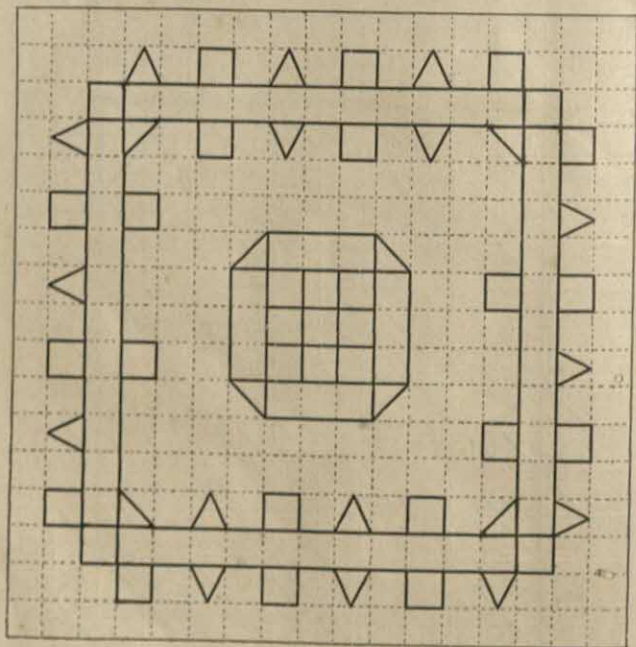
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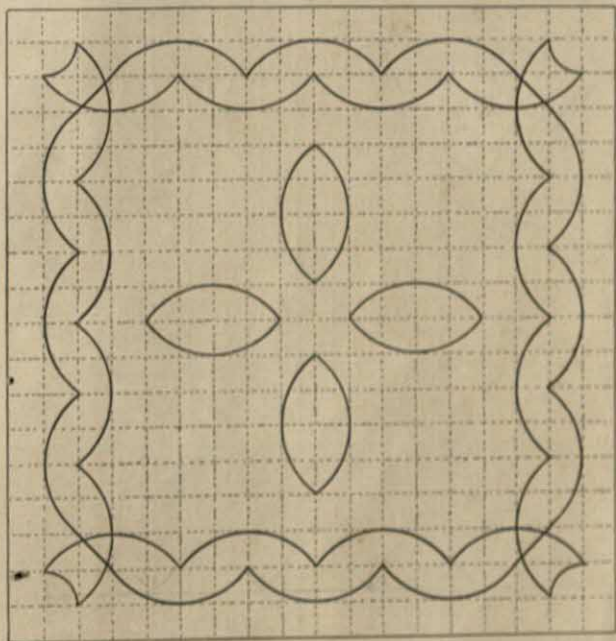
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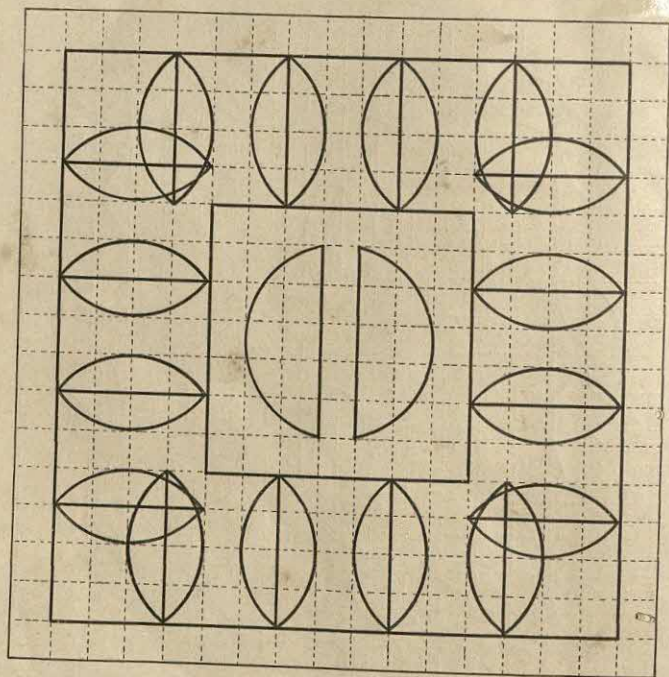
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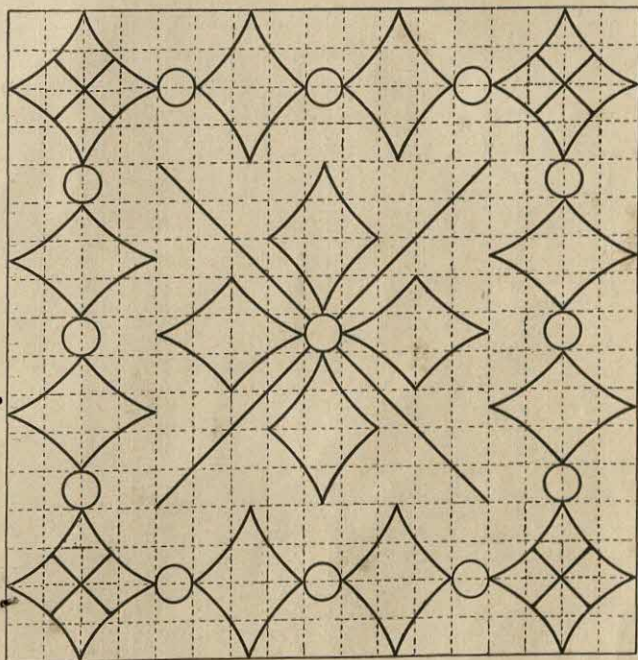
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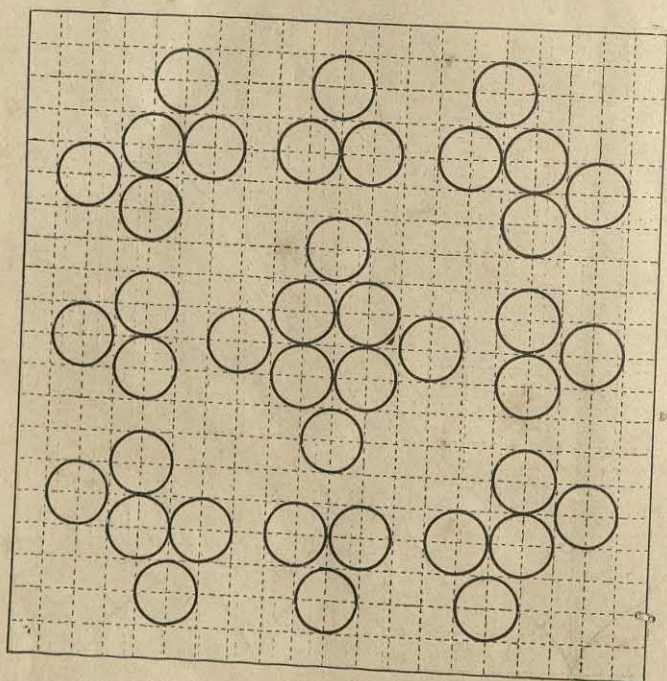
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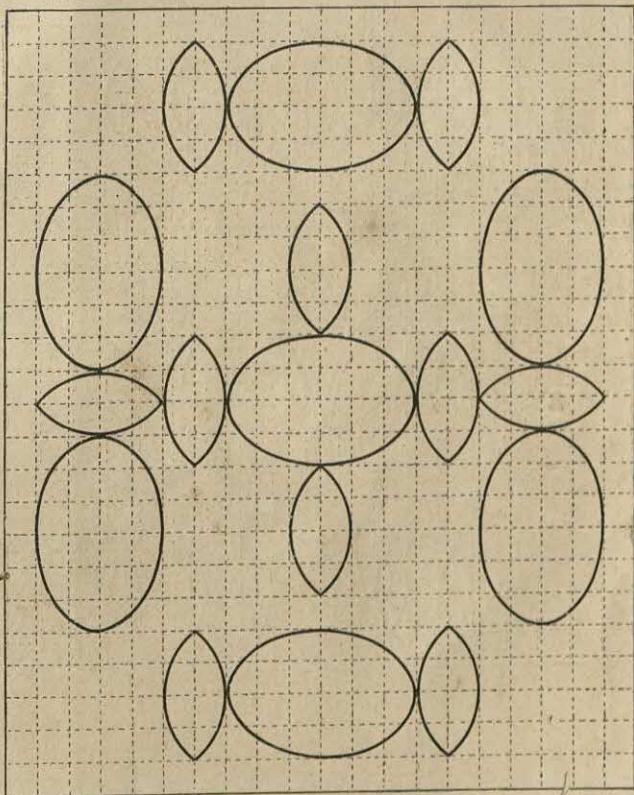
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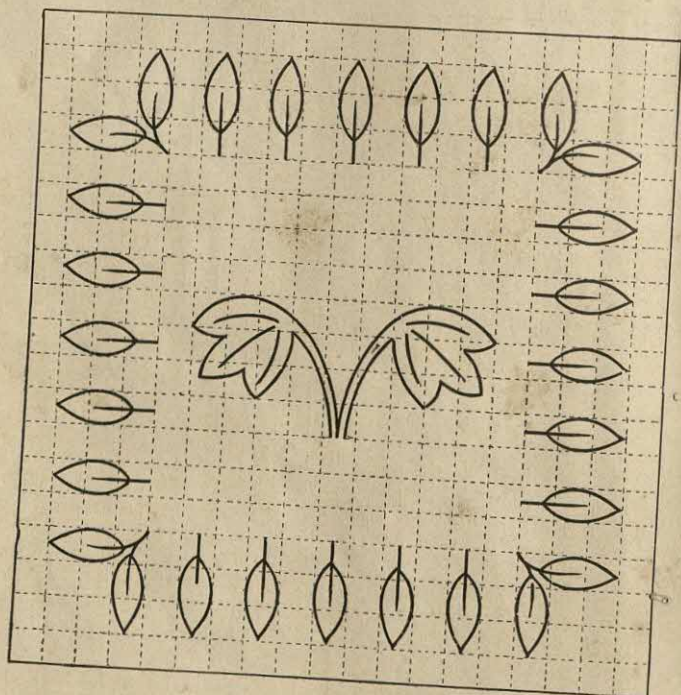
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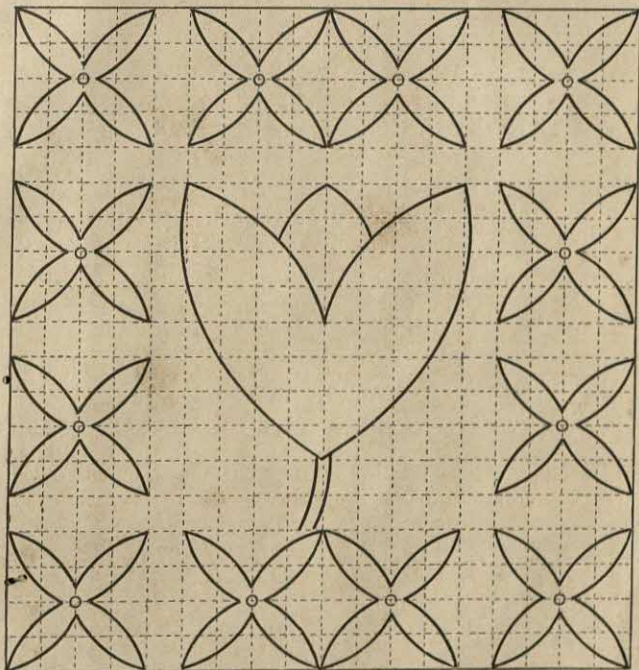
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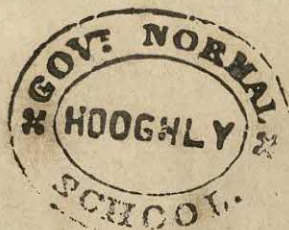


4 (c).



4 (*d*).

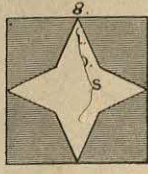
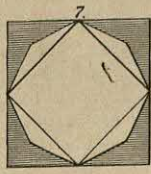
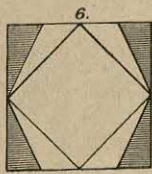
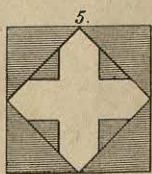
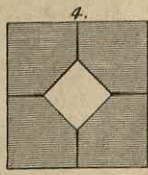
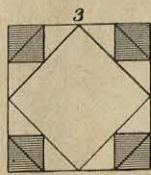
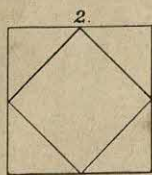
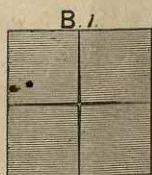
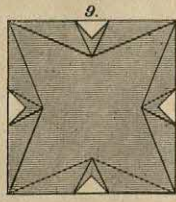
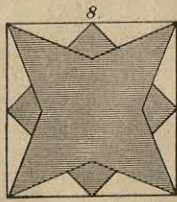
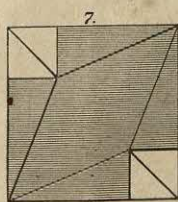
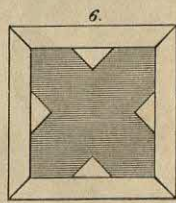
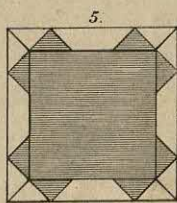
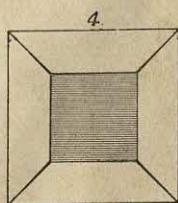
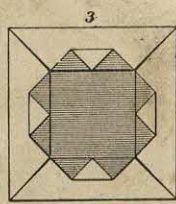
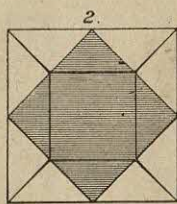
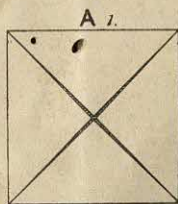




APPENDIX II.

DIRECTIONS FOR PAPER FOLDING.

- A. 1. Fold the right top corner to the left bottom corner.
Open the paper. Fold the left top corner to the right bottom corner. Open the paper. Fold the four corners to the centre.
- A 2 to 9. Fold these designs from A 1, as shown in the illustrations.
- B 1. Turn over A 1. Fold the four corners to the centre.
Turn the paper over again.
- B 2 to 8. Fold these designs from B 1, as shown in the illustrations.



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